



# Annual Report

2015-2016

वार्षिक अहवाल

२०१५-२०१६

(University Act No. XXIX of 2014)

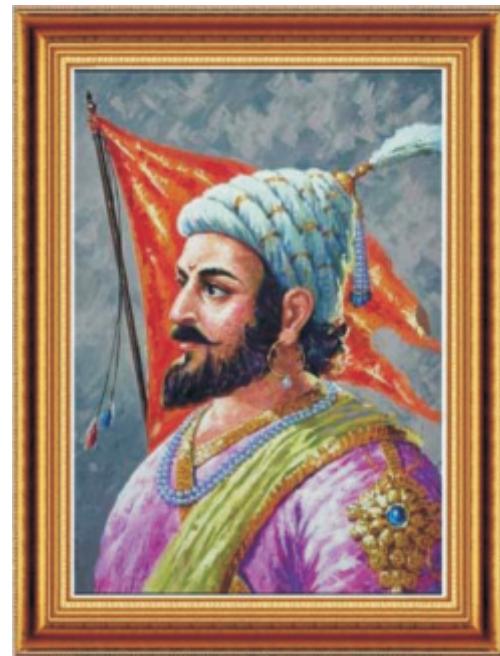


डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठ, लोणेरे - रायगड  
Dr. Babasaheb Ambedkar Technological University, Lonere - Raigad

**Our Guiding Spirit**



**Our Inspiration**



**Bharat Ratna Dr. Babasaheb Ambedkar**

**Chhatrapati Shivaji Maharaj**

“We are Indians, firstly and lastly.”

“Men are mortal. So are ideas.  
An idea needs propagation as much as  
a plant needs watering.  
Otherwise both will wither and die.”

Bharat Ratna Dr. Babasaheb Ambedkar

**Dr. Babasaheb Ambedkar Technological University,  
Maharashtra State**



**Annual Report 2015-2016**

**Vidyavihar, Lonere Dist. Raigad- 402103  
Maharashtra**





**His Excellency the Chancellor**  
**C. Vidyasagar Rao**  
**Dr. Babasaheb Ambedkar Technological University,**



**Vice-Chancellor**  
**Dr. W.N. Gade**  
**Dr. Babasaheb Ambedkar Technological University,**  
**(From 2<sup>nd</sup> March, 2015 - 2<sup>nd</sup> March, 2016)**



**Vice-Chancellor**  
**Dr. V.G. Gaikar**  
**Dr. Babasaheb Ambedkar Technological University,**  
**(From 2<sup>nd</sup> March, 2016 till date)**



**Dr. Babasaheb Ambedkar Technological University,  
Maharashtra State**  
**(University Act No. XXIX of 2014)**

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# **Annual Report 2015-2016**

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## Vice-Chancellor's Report at Convocation on 6<sup>th</sup> April, 2016

Hon'ble Chief Guest of today's 19<sup>th</sup> Convocation of Dr. Babasaheb Ambedkar Technological University, Padma Bhushan Prof. J. B. Joshi, former director of Institute of Chemical Technology (ICT) and Homi Bhabha Professor, Homi Bhabha National Institute, Hon'ble members of the Executive Council, the Academic Council and other Statutory Bodies, invited guests, graduating students and their proud parents, the faculty members and the non-teaching staff of the University, members of press, representatives of electronic and print media, and ladies & gentlemen. On the behalf of Dr. Babasaheb Ambedkar Technological University, I extend a very warm and cordial welcome to all of you on this 19<sup>th</sup> Convocation of the University. I am indeed delighted to welcome you all. The district of Raigad is blessed with historical legacy of Chhatrapati Shivaji Maharaj and Bharat Ratna Dr. Babasaheb Ambedkar, both role models to the community. This place has also seen stalwarts such as Dr. C. D. Deshmukh, Acharya Vinoba Bhave, Mahamahopadhyay Datto Waman Potdar, Shri Shivram Mahadeo Paranjape, Shri Narayan Malhar Joshi, Shri Waman Malhar Joshi, Shri. Pandurang Shastri Athavale and Shri. Nana Saheb Dharmadhikari as visiting dignitaries. We are at the foot of the Raigad fort, the seat of historical power of Maharashtra that provides an environment, ideal and conducive for nurturing academic progress and pursuit of knowledge.

This University was established on 5<sup>th</sup> May, 1989 by the Government of Maharashtra under the Dr. Babasaheb Ambedkar Technological University Act No. XXII, 1989. We celebrated the Silver Jubilee Year in 2014. 1<sup>st</sup> March, 2016 is another milestone now in the history of this University, when with the appointment of yours truly, the State Government has declared this University as the State Technical University to which the Engineering & Technology, Pharmacy, Architecture and Hotel Management and Catering Technology Institutes from the State shall get affiliated over the next few years. The University is committed to provide guidance and directions in quality technical education, research and development to meet the needs of industry, businesses, and the society at large. The benefits of the research and education at the University has to flow to the eco-system in its surrounding. At present, the University administers 08 UG, 06 PG and 08 PhD programs. There are 2733 students on the campus. The University has long introduced "Choice Based Credit System" for all B. Tech courses. The University was the first University in the state to introduce a compulsory "Basic Course in Human Rights" as per the recommendations of Maharashtra State Human Rights Commission. In this convocation, 10 Ph.Ds, 99 M. Techs, 681 B. Tech Degrees, 17 Advanced Diplomas and 429 Diplomas will be awarded. This year also saw 22 new PhD students entering into the University and we hope to increase this number in years to come. In the last five years, the University has produced 357 papers in international journals and conferences, has obtained one international patent, one national patent and applied for more. The average H index of the University is 15. Considering that the research programs started late in the University, just 10 years ago, this number is matching general expectations.

Our graduates and faculty face several odds and difficulties of frequent power cut-offs, inadequate hostel facility, remoteness of location, lack of amenities such as hospital and school, delays in releasing funds and in appointments and promotions. There are challenges in attracting and retaining talented faculty and competition from well endowed private universities. But these odds also provide us opportunities of expansion in postgraduate education, research and innovation; industrial collaborations for R&D projects, consultancy, and continuing education for employees and public-private partnership. The faculty members have continued their research after obtaining their Ph.D. degrees. The number of students carrying out doctoral research is increasing and so is the number of externally funded research projects coupled with the research output in terms of papers published in the peer refereed journals.

In the last few years, the faculty members have started working with final year students promoting undergraduate research. This has even led to presentations of papers in national or international conferences. Close to 40% students are girls despite remote location and inadequate infrastructure. Most students come with prior knowledge of basic programming. Majority of students admitted to M.Tech. programs are GATE qualified. Some of the

departments have adopted the e-learning approach and use of open source platform. Access to MOOC and NPTEL is, therefore, accepted in the learning process. The evaluation process is becoming increasingly transparent and will become soon completely e-governed. The University strives to provide best of the education to the students of the University, despite the odds and disadvantage of being located at a remote place. The struggles of the pioneering efforts of late Prof. V.R. Deshpande and legacy of Dr. Babasaheb Ambedkar are kept in mind to develop this University as much humanly as possible. Wi-Fi internet connectivity is available in academic complex and internet facility in the entire campus is provided with fiber optic cables as backbone. We plan to augment this facility soon for faster connectivity. In the age of 4G we cannot remain isolated from developments elsewhere.

We had been receiving funds under Technical Education Quality Improvement Program of MHRD, since 2012 in Phase-II. In both TEQIP phases, we received substantial funding and the University derived maximum benefits from this support through the State. TEQIP II, which is now arriving at the end of its period on 1<sup>st</sup> October, 2016, has seen several activities, including travel of faculty and students to different educational institutes, nationally & internationally, good number of research papers and increasing number of Ph.Ds. Many laboratory facilities have been created under TEQIP-II in the University. Under TEQIP II, the University provided 19 teaching assistantships and 22 research assistantships. As a result, the University has been able to make significant progress. The University is expected to get additional grant of Rs. 5 crores over and above the original grant of Rs. 12.5 crores. Although, the amount is not large, the impact of these developments will be visible in coming years.

The University has received recognition under 12(B) of UGC Act and has started receiving development grants from UGC. Besides, the University has been accredited by NAAC. It is mandatory for the University to put in place Internal Quality Assurance Cell (IQAC). Accordingly, IQAC has been constituted and the first meeting of this cell has been held. The cell has started functioning regularly. IQAC has chalked out a schedule for the Academic Audit. The audit is going to be carried out by a team of external experts. This exercise will be over before the end of the academic year. The ISO audit team visited the University to carry out the ISO audit. The University is in the process of complying with the non-conformities so that the University receives ISO Certificate soon. A comprehensive proposal has been submitted for receiving RUSA grants under 8 heads. We expect to get funding under Infrastructure Development grant and, Research and Innovation.

The University has won the World Education Award at the World Education Summit in Dubai during Feb 7-8, 2016 for “Collating Global Practices in Education” for deploying an “Online PhD Academic Management & Online PhD Thesis Processing System” to make research programmes expedient and effective. Prof. Yogesh Patil, Controller of Examinations, represented the University at the Summit. The University was also chosen for the Leaders Speak Education Summit Award 2015 in the Best-in-House ERP Solution Category for Higher Education for Online Academic Management and Online PhD Thesis Processing, held at Royal Plaza, New Delhi, on December 4, 2015. The University has consistently declared all its results for Summer and Winter Examinations in a stipulated time period of 30 days. The University has signed an MoU with Central Depository Services Limited (CDSL) for Demat formatting of degrees on Jan 12, 2016. In a span of 2 to 3 years, the entire Degrees and Grade sheets of the University will be available in the Demat format for verification purpose. The CDSL’s National Academic Depository (C-NAD) has offered to provide a system of creating electronic form and making it available for verification the award details of students who have acquired educational qualifications on passing the examinations conducted by the Institutions and services related thereto. The University has implemented most of the reforms suggested by Agrawal Committee for Examinations.

As per the initiative by MHRD, IITM is conducting online live-lectures program, Quality Enhancement in Engineering Education (QEEE). Currently QEEE Phase-V is on since January 2016. The University has registered for total 26 theory subjects in different disciplines of engineering and one lab in this phase. This helps the University to cope-up with crunch of faculty. The Chemical Engineering Department has published 45 papers and has collaboration with ICT under TEQIP for innovation products and several industries such as, ONGC, Excel Industries Ltd., Privi Organics Ltd., and Rhodia Specialty Chemicals India Ltd., for skill development of their employees. The Department has established good rapport with industries situated in MIDC areas of Lote Parshuram, Mahad, Roha, Patalganga and Tarapur. Currently, Department of Electronics and Telecommunication Engineering keeping in line with the market trend, has the largest intake of 120 UG per year and 18 PG per year. The department is poised to increase the PG programs and PhDs in coming year. The Department is taking efforts to improve employability of its graduates and interaction with industries to improve infrastructure. Dr. Nalbalwar of the Department has a research project supported by AICTE on Optimization of Signal Processing in hearing aids. He has been coopted as member of BoS in VIT, Pune and the BoS of University of Pune. This year 30 students have cleared GATE and 48 students and faculty members have attended workshops at IIT-B. The faculty and students of the department have produced 30 papers, conducted 5 training programs. Dr. Brijesh Iyer of the Electronics & Telecommunication Engineering Department received the research fellowship of Indian National Academy of Engineering for the year 2015-2016.

The Civil Engineering department is actively involved in industrial consultancy and outreach activities to have linkages with Airport Authority of India, Dredging Corporation of India, State PWD, Raigad Zilla Parishad, Small Scale Irrigation Department and to many private industries. The Department of Civil Engineering has contributed to campus development on many occasions. A project of ‘Design and Construction of Laboratory Complex’ received Rs. 2 Cr. for DBATU from AICTE. All Project Documentation necessary for execution has been prepared in-house. Dr. S.M. Pore is working as Structural Consultant to Airport Facilities at Belgaum Airport for Airport Authority of India He is also appointed as Structural Consultant to Zilla Parishad, Raigad for their major roads, bridges and building projects. He organized a one day workshop on 21/03/16 for “Jal-Jagruti Abhiyan” on directives of GoM. He also has been appointed as member of District Level Committee for Water Conservation and Management. This year, 22 students of this department have secured prizes and appreciations in various state level technical events and competitions.

Dr. B.F. Jogi and Dr. R.S. Pawade of Mechanical Engineering Department organized one week workshop under TEQIP II on ‘Developments in Welding Technology’, during March 08-12, 2016, which was attended by participants from all over Maharashtra and Industries. Two companies, Ador Pvt. Ltd. Pune and Fronius Pvt. Ltd. Chakan, provided practical training to the participants. Dr. N. Agrawal was recognized for outstanding contribution by Applied Thermal Engineering, an international journal of ELSEVIER. He also organized two faculty development program events on ‘Recent Trends in Energy Research’ during 7 - 11 December 2015 and on ‘Safety Measures in Laboratories’ during 25 - 29 February 2016. Prof. Somesh Hingmire of Instrumentation Engineering, of Institute of Petrochemical Engineering was a member of committee for International Conference on Industrial Instrumentation and Control (ICIC –2015) of Indo-US Collaboration for Engineering Education at Government College of Engineering, Pune, during 28-30 May, 2015. Prof. B.C. Kharbas has completed Ph.D. in Electrical Engineering from Malaviya National Institute of Technology, Jaipur, on ‘Some Investigation on Transmission Cost Allocations and Enhanced Revenue Reconciliation in Open Access of Transmission Network’. His thesis has been selected for presentation at National level in POSOCO Power System Award under research category in power system in the academic year 2015-16. He also presented his research work at an industrial interface meet of Power Grid Corporation of India Ltd (PGCIL) and IITD. Dr. Amit P. Shesh, has been nominated on the panel of Yashwantrao Chavan Maharashtra Open University, Nashik as the expert to design their UG and PG study materials, and on the Examination Panel of RIT, Islampur.

The Computer Engineering department has produced 24 papers and developed collaboration with Persistent System Pvt. Ltd., and Deloitte. The B. Tech. graduates of the department are employed by industries such as IBM/ Google/ Oracle/ TCS/ Cognizant, NITs / GCoE and many private institutes. The department has been shifted to newly created premises in the building after creating four new undergraduate, and one post-graduate Research Laboratory. Prof. A.W. Kiwelekar presented a paper in the 10th European Conference on Software Architecture (ECSA 2015) held in Dubrovnik, Croatia and research scholars, Hansraj Wankhede and Swanand Navandar, presented papers in the doctoral consortium of Fourth International Conference on Learning and Teaching in Computing and Engineering (LaTiCE 2016) at IIT Bombay from 31<sup>st</sup> March-3<sup>rd</sup> April, 2016. Dr. N. S. Lingayat represented India in the International Conference on TVET Skills Development for Poverty Alleviation, Entrepreneurship, and Employability and Regional Program on Entrepreneurship Development in TVET (International Program for countries in the Asia-Pacific Region) organized by Colombo Plan Staff College, Manila, Philippines, June 2015. Dr. N. S. Lingayat and his team successfully implemented the Energy Efficiency Project sponsored by Maharashtra Energy Development Agency (MEDA). Electricity bill amount of Rs. 4 Lac has been saved in the past eight months. The project has received 8<sup>th</sup> India Power Award by Council of Power Utilities, New Delhi, on Nov 6, 2015 and 10<sup>th</sup> Energy Conservation Award by Maharashtra Energy Development Agency, Pune, on February 18, 2016.

The faculty of Department of Electrical Engineering delivered 9 expert talks across the state and country and attended 9 training programmes. The faculty members are also on the Board of Studies and Selection Committees of other Universities such as University of Pune and Rajaram Bapu Institute of Technology. The Department produced 4 M.Tech. this year and 14 M. Tech. projects are currently ongoing. A National level Techfest “CYNOSURE” is arranged every year in the University and it is attended by teams coming from all over India. Under this activity, various technical events are organized such as paper presentation, model making, etc. by all the departments. Our students also participated in ‘Avishkar’, a State-level innovation and research competition.

The Department of Physics, has two Ph.D. scholars with two faculty qualified for guiding PhD while other three faculty members are encouraged to pursue Ph.D. The department has NanoScience Lab and collaborates with IITB and Mumbai University. The department has published 22 papers in International Journals, 20 conference papers in National conferences and 10 in International Conferences. The faculty of the department have made visits to USA, Italy, Japan, Singapore, Germany, UK, France, Switzerland, Australia, and New Zealand. The Department faculty is also invited as visiting faculty by Gombe state University, Nigeria and as visiting faculty in Mumbai University and SRTM University, Nanded.

The University conducted 3-year modular courses in Mechanical and Electrical Technology successfully for the project affected persons deputed by JSW Ratnagiri. Three orientation programmes of one month duration for graduate trainees of L & T, Baroda, have been organized successfully by the University. In pursuit of academic excellence, the University awards fellowships, prizes etc. on regular basis to outstanding students. Recently, POSCO TJ Park Foundation, South Korea, has signed an MoU with the University for offering fellowships to 10 students of the University.

Chemical Engineering and Mechanical Engineering Departments of the University have signed an MoU with ICT under TEQIP – II for seven innovative research projects under innovation grant from MHRD. We are expecting very good academic output in the form of patents and technology transfer. Sports have been an integral part of the human development, Hon. Governor, Maharashtra State has started the Krida Mahotsav as a Sports Promoting activity among all the state Universities of Maharashtra. University students regularly participate in these and other sports activities at state and national levels.

Presently, the sports infrastructure is not up to the mark. In view of this, it is proposed to procure sports equipment in near future. Ms. Manasi Gawde of Department of Information Technology has brought several laurels to the University. She has won 9 gold medals and 3 silver medals for swimming and water polo at National level. She was awarded the Raigad Bhushan award for her achievements. Her achievements become all the more important when the University does not have the facilities for the sport.

With the new status of the affiliating Technical University of the state, the University is poised to take a major leap in its activities in near future. We are at the drawing board again to draw newer plans and to set up the model for Technical education in the State of Maharashtra. The jurisdiction of this University spans now the entire state and soon the regional and sub regional centres shall come in existence. We are in the process of establishing the formats of affiliation and statutes for governance. The administration and faculty of the University are preparing a strategic development plan and I hope that the plan will be supported by the Government for implementation of the action plan to convert this University as a full fledged State University with all facilities and manpower. We shall be expanding facilities for post-graduate education by increasing intake capacity of existing programmes on immediate basis and by starting new PG programmes at a later stage. The emphasis will shift to research and innovation with several interdisciplinary post-graduate schools and Research and Innovation Centres. The doctoral research will be increased many-fold by giving attractive fellowships to Ph.D. students. The interaction with industry shall be enhanced by taking sponsored research projects from industry leading to innovation in products and services. In five years' time we hope to build a Technology Business Incubation Center on the campus. We will take up problems faced by the industry either through consultancy or problem solving projects from industry. The University shall be introducing entrepreneurship development programmes to motivate students to become entrepreneurs and provide jobs rather than searching for job. Academic audit will be integral part of the activities with training programmes and continuing education programmes for industry and academia. We plan to introduce, vocational programs, part-time and joint M. Tech. programmes, five-year integrated M. Tech. programmes on the lines of IITs.

Jai Hind!

**Dr. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY**  
**CONVOCATION ADDRESS – 2016**



**GENERATION OF NATIONAL WEALTH THROUGH EDUCATION AND RESEARCH**  
**Padmabhushan Dr. J. B. JOSHI**  
**Homi Bhabha National Institute**  
**Anushaktinagar, Mumbai**

Hon'ble Vice Chancellor Professor V.G. Gaikar, other authorities of the Management Council, Senate and others, Distinguished invitees, faculty, Non-teaching staff and my dear student friends. I am indeed grateful to Professor Gaikar for inviting me as a Chief Guest for the convocation of a University named after the highly respected Bharatratna Babasaheb Ambedkar.

First of all, I congratulate all the graduating students for the successful completion of their respective degrees. I also wish them all the best for successful and satisfying profession and happy personal life. I am now taking an opportunity to dedicate my lecture to you. You indeed have great, however, enjoyable responsibility on your shoulders. All of us know that our country is poor, and on the basis of per capita income, India stands at the rank of 140 among 150 countries (Slides 1 and 2).

The total income of our country is about 130 lakh crores divided by the population of 130 crores gives the per capita income of Rs. 1 lakh per year. Why this is so? We do negligible global business only about one per cent (Slide -3). This is also true in the area of herbal healthcare, a science developed in our country. In the area of electronics, it is 0.1%. Our agricultural productivity is 2 to 10 times less than the proven (Slide -4) and we provide services to the world at the lowest level in the value chain. We import most of the items which are knowledge based (Slide- 5). Our country is rich in terms of titanium ores and can provide it to the world for the next 500 years. However, we do not have a good technology. Therefore, we sell the valuable ore at the rate of Rs. 6/kg to the countries knowing how to make titanium metal and import from them at the rate of Rs. 2500/kg (Slide - 6). Same is the story for rare earths. In fact, in all the developed nations, the wealth is generated through the development of innovative technologies. It is now well-known that the per capita income (PCI) of any country can be shown to be proportional to the development of new knowledge in that country. In a simplified form, it can be expressed (Slide - 7) as PCI to be proportional to the number of Ph.Ds per million population.

In our country also, wherever new knowledge has been developed, there has been a success story, for instance, green revolution and white revolution. The successful space and atomic energy programmes are worth mentioning. In the area of drugs and medicine, agrochemicals and dyes, India does more than 10% of the global business. Now I am going to present some success stories about which I am familiar.

In forties and fifties, edible oil was being used for soap making. Therefore, there was an acute storage of edible oil. ICT (the then UDCT) developed technologies on the basis of non-edible oils for soap making as well as good number of high quality products. This research resulted into the availability of edible oil to the public at large and resulted into more than 5 lakh jobs. Secondly, in forties, ICT developed innovation centre for dyes and intermediates (Slide-9). The current turnover of Rs. 10,000 crores of dyes industry can be traced back to the activities in the innovation centre. Another important area which has helped the Indian Chemical Industry is Process Intensification. In this activity, new knowledge is generated for improving the selectivity of processes (which reduces the manufacturing cost) and reduces the pollution in a big way (Slides 10 and 11). The new knowledge has also been used in miniaturizing the equipment which substantially reduces the capital cost. For instance, I am briefly describing the innovations and commercialization of two equipment: self inducing reactors (Slides 12 and

13) and annular centrifugal extractors (Slide 14 and 15). Slides 13 and 15 give a list of international publications. In fact, for any good lasting technology, the knowledge must be developed in the University which is at the cutting edge at the global scale. It should also be developed through students so that a new generation of confident engineers gets created. Most importantly, the knowledge generated through research and industrial and societal implementations must be taught in the undergraduate and postgraduate classes. Such a balanced approach is able to satisfy the mission statement of any University or any Research Institution: generation and dissemination of new knowledge.

Dear students, there are enormous number of opportunities. Now, I will describe few. The Sun gives thermal energy of 1,62,000 terawatts (TW) to Earth (Slide 16). The total energy consumption of the world is 15 TW and the total energy used for the entire photosynthesis is 90 TW. The example of biofuel (Slides 17 to 21) describes the possibility of wealth generation of 10 lakh crores. Particularly there is a possibility of reaching the wealth to the agricultural sector, which contributes to two third of our population.

Slides 22 to 25 address seven very important needs of the society and creative ways of solving them simultaneously: (a) enhancement in the rate of photosynthesis (b) CO<sub>2</sub> sequestration (c) availability of food (d) treatment of agricultural and urban solid waste (e) energy (f) getting a new source of feedstock for fertilizers, petrochemicals, pharmaceuticals, construction materials, textiles, speciality chemicals, etc. and (g) improving water retention in the soil.

Slides 26 to 37 describe the methodology of solving few common problems faced by the society. One such problem is efficient cooking. Our country uses about 30% of the national energy in household cooking equivalent to about 3 lakh crores. Eighteen crores of our families still use biomass based cookstoves with an average efficiency in the range of 10 to 20% and resulting into heavy pollution. Our country also has an innovative programme of providing 11 crores school going students with noon meals. These slides represent several opportunities of creating national wealth.

The US National Academy of Engineering has posed ten grand challenges to all the engineering departments of the World which are of great interest to the mankind. Topping this list is harnessing the solar-thermal energy at a cost of Rs. 5000/- per m<sup>2</sup> of collection area. Slides 38 to 40 give a solution to the problem with a balanced approach: (a) generation of world class knowledge and publication in reputed international journal: Nature Climate Change. (b) development of technology with a cost less than Rs. 5000/-m<sup>2</sup> and (c) teaching the new knowledge and the implementation experience to the undergraduate and postgraduate students.

My dear graduating students, develop a habit of seeing big dreams. You are indeed capable of solving the problems faced by the nation. Please do imbibe certain qualities (Slide 43) and create huge national wealth as well as perpetual personal happiness.

## GDP AND INNOVATION RANKING

GDP Ranking	Country	Per Capita Income in US Dollars	Innovation Ranking
5	United States	55,904	8
6	Singapore	53,224	1
7	Australia	51,642	22
11	Sweden	48,966	10
13	Netherlands	44,333	12
14	United Kingdom	44,118	15
15	Canada	43,935	14
18	Germany	41,267	19
19	Belgium	40,456	25
20	France	37,728	20
22	Israel	35,702	16
24	Japan	32,481	9
26	Italy	29,847	38
29	Spain	26,327	24
36	Trinidad and Tobago	20,380	51
52	Argentina	13,428	92
60	Kazakhstan	11,028	60
62	Malaysia	10,073	21

1

GDP Ranking	Country	Per Capita Income in US Dollars	Innovation Ranking
63	Mexico	9,592	57
65	Mauritius	9,187	45
69	Brazil	8,802	72
74	China	8,280	27
90	Thailand	5,426	44
101	Tonga	4,311	-
106	Angola	4,062	-
114	Sri Lanka	3,768	69
118	Indonesia	3,416	71
126	Bhutan	2,837	-
130	Sudan	2,194	-
131	Vietnam	2,171	73
140	India	1,688	81

2

## TURNOVER OF CHEMICAL AND ENERGY INDUSTRY (2014, Rs. In crores)

INDUSTRY	WORLD	INDIA	PERCENT
CHEMICAL	36,000,000	2,00,000	0.56
HERBAL HEALTHCARE	1,500,000	15,000	1.00
FOOD PROCESSING (2002)	10,000,000	1,50,000	1.50
ELECTRONICS (2012)	6,700,000	6,600	0.1
BIOTECHNOLOGY	3,000,000	27,000	0.90
ENERGY	15 TW	0.6 TW	4.00

3

## AGRICULTURAL PRODUCTIVITY

		Average yield, India (2010)	World's most productive farms (2010)
S.No.	Product	(tonnes per hectare)	(tonnes per hectare)
1	Rice	3.3	10.8
2	Wheat	2.8	8.9
3	Mangoes	6.3	40.6
4	Sugar cane	66	125
5	Bananas	37.8	59.3
6	Cotton	1.6	4.6
7	Fresh Vegetables	13.4	76.8
8	Potatoes	19.9	44.3
9	Tomatoes	19.3	524.9
10	Soyabean	1.1	3.7
11	Onions	16.6	67.3
12	Chick peas	0.9	2.8
13	Okra	7.6	23.9
14	Beans	1.1	5.5

4

## TITANIUM

Sr.no	Details	Data
1	Total reserves of ores in the world	600 M Tons
2	Reserves in India	100 M Tons
3	Export of ore	6 Rs./kg
4	Import of Titanium	2500 Rs./kg

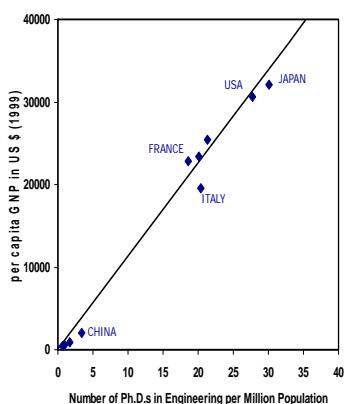
6

## TOP ITEMS OF IMPORTS (2014)

Sr.no	Items of Imports	Rs (in crores)
1	Crude oil	12,00,000
2	Electronic Equipment	2,14,000
3	Machines, Energies, pumps	2,09,000
4	Chemicals(organic)	1,22,000
5	Plastics	79,000
6	Iron and Steel	76,000
7	Vegetable/ Animal oils and Fats	72,000
8	Ores/ Slag/ Ash	50,000
9	Medical/ Technical Equipment	48,000
10	Defence equipment	37,000

5

## Power of Trained Human Resource



## PROCESSES FOR SOAPS AND OLEOCHEMICALS FROM NON-EDIBLE OILS

- ✓ In mid 40's and 50's, Soaps and Oleochemicals were manufactured from edible oils.
- ✓ UDCT developed the processes from non-edible oils which were successfully commercialized.

Effect:

- Increased availability of edible oils
- Generated 5 lakh jobs in the non-formal sector

## UDCT: ORIGIN OF DYE STUFF INDUSTRY IN INDIA

Mid Forties:

➢ UDCT provided the knowledge base as well as incubation centre for dye-stuffs, intermediates and colorants. The origin of the entire industry can be traced back to UDCT. The industry now has a turnover of Rs. 12,000 crores.

## Process Intensification

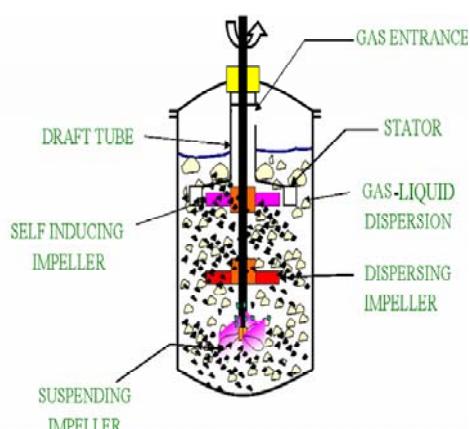
1. Soda ash
2. Nitric acid
3. Refinery operations
4. Petrochemicals
5. Fertilizers
6. Pharmaceuticals, agrochemicals, dyestuffs, paints, oleochemicals, surfactants

10,000 crores

## AGROCHEMICALS AND PERFUMERY CHEMICALS

New processes have been developed, designed and commercialized with a turnover of 2000 crores / year and has captured more than 30 % of the world market for the chosen areas of manufacture.

## GAS INDUCING CONTACTOR WITH THREE IMPELLERS

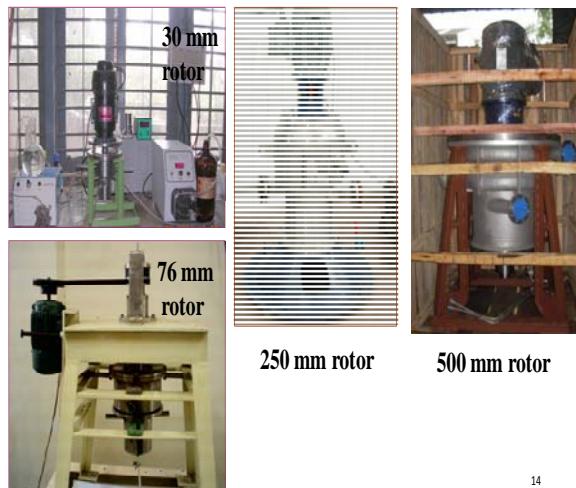


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## PUBLICATIONS

Murthy, B.N., Ghadge, R.S. and Joshi, J.B.	CFD Simulations of Gas-Liquid-Solid Stirred Reactor: Prediction of Critical Impeller Speed for Solid Suspension	Chem. Eng. Sci., <b>62</b> , 7184-7195, 2007.
Deshmukh N.A., Patil, S.S. and Joshi, J.B.	Gas Induction Characteristics of Hollow Self-Inducing Impellers	Trans. Instn. Chem. Engrs - A: Chem. Eng. Res. and Des., <b>84</b> , 124-132, 2006.
Patil S. S and Joshi J. B	Optimum Design of Multiple Impeller Self-Inducing System	Ind. Eng. Chem. Res., <b>42</b> , 1261-1265, 2003.
Patwardhan, A.W. and Joshi, J. B.	Design of Gas Inducing Reactors	Ind. Eng. Chem. Research, <b>37</b> , 49-80, 1999.
Patwardhan , A.W. and Joshi, J.B.	Hydrodynamic Characteristics of Mechanically Agitated Gas-Liquid Reactors Provided with Gas Inducing Impellers.	Ind. Eng. Chem. Research. <b>36</b> , 3904-3914, 1997.
Mundale, V.D. and Joshi, J.B.	Optimization of Impeller Design for Gas Inducing Type of Mechanically Agitated Contactor.	Can. J. Chem. Engng. <b>73</b> , 161-172, 1995.
Raidoo, A.D. Raghava Rao, K.S.M.S. and Joshi, J.B.	Improvement in the Gas Inducing Impeller Design	Chem. Eng. Commun., <b>39</b> , 43-66, 1987.
Joshi, J.B.	Modifications in the Design of Gas Inducing Impellers	Chem. Eng. Commun., <b>5</b> , 213-218, 1980.

## EXPERIMENTAL SET-UP



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Kulkarni, A. V., and Joshi, J. B.	Estimation of Hydrodynamic and Heat Transfer Characteristics of Bubble column by Analysis of Wall Pressure Measurements and CFD Simulations	Trans. Instn. Chem. Engrs - A: Chem. Eng. Res. and Des., <b>84</b> , 601-609, 2006.
Roy, S., Dhotre, M.T. and Joshi, J.B.	CFD Simulation of Flow and Axial Dispersion in External Loop Air-Lift Reactor	Trans. Instn. Chem. Engrs - A: Chem. Eng. Res. and Des., <b>84</b> , 677-690, 2006.
Deshmukh, S.S., Joshi, J.B. and Koganti, S.B.	Flow Visualization and 3D CFD Simulations of Annular Region of Annular Centrifugal Extractor	Ind. Eng. Chem. Res., <b>47</b> , 3677-3686, 2008.
Gandhi, A.B., Gupta, P.P., Joshi, J.B., Jayaraman, V.K., and Kulkarni, B.D.	Development of Unified Correlations for Volumetric Mass Transfer Coefficient and Effective Interfacial Area in Bubble Column Reactors for Various Gas-Liquid Systems Using Support Vector Regression	Ind. Eng. Chem. Res., <b>48</b> , 4216-4236, 2009.
Tamhane, T. V., Joshi, J. B., Mudali, U. K., Natarajan, R., and Patil, R. N.	Axial Mixing in Annular Centrifugal Extractors	Chem. Engg. Journal, <b>207</b> , 462-472(2012)

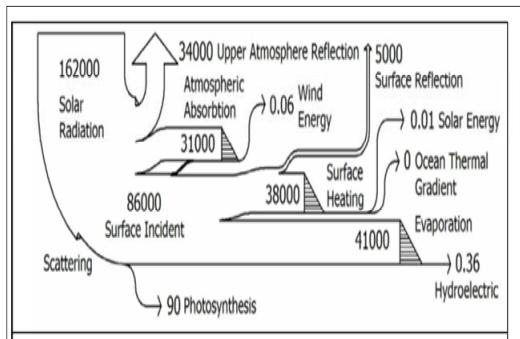


Figure1: Exergy Flux of Solar Radiation to Earth in units of TW. The world's requirement is only about 15 TW.

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## OPPORTUNITY -1 (Bio Fuel)

1. Technology for fractionation of lignocelluloses for subsequent bioconversion
2. Cost effective enzyme and microorganisms for breakdown of lignocellulose compounds to sugars
3. Development of biotechnologies for conversion of sugars to alcohol: 320 lit/ton biomass
4. Purification of products

17 17

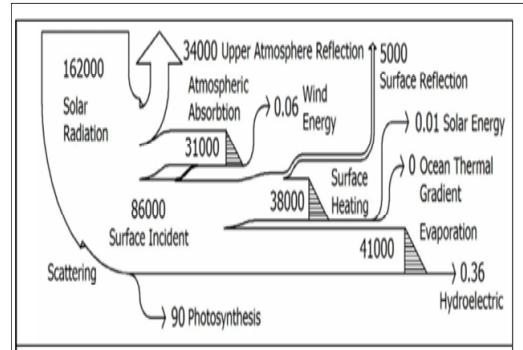
1. Growth rate of biomass/ha/yr = 10 tons
2. This means the use of solar efficiency = 0.3 per cent
3. Ethanol produced per ha=320 liters tons
4. Present capital cost per liter = 150 Rs./liter
5. Present operating cost per liter = 6 Rs./liter
6. Depreciation + interest = 15 Rs./liter
7. Contribution to the manufacturer = 4 Rs./liter
8. Fixed plus operating cost + contribution without raw material is = 25 Rs./liter

18 18

Cost per litre of alcohol (Rs.)	Possible share to Farmer Rs./hectar (40% of RM cost to manufacturer)
25	0
35	12,800
40	19,200
50	32,000
100	96,000

1. Solar energy efficiency of photosynthesis for 10 tons dry biomass/year/ha 0.3%
2. If the energy efficiency is taken to 4.5%, the biomass growth rate 150 tons/yr
3. Capital cost per litre 75 Rs.
4. Operating cost per litre 3 Rs.
5. Contribution of the manufacturer 4 Rs.
6. Fixed plus operating cost + contribution without raw material 14.5 Rs.

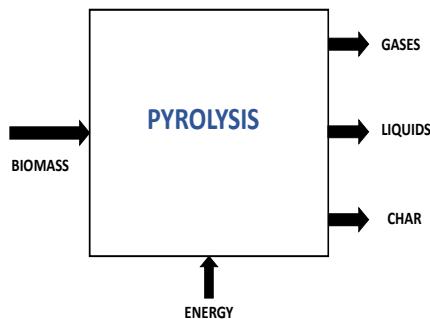
Cost per litre of alcohol (Rs.)	Possible share to Farmer (Rs./ha)
20	105,600
25	201,600
30	297,600



**Figure1:** Exergy Flux of Solar Radiation to Earth in units of TW. The world's requirement is only about 15 TW.

Total land in India	= $330 \times 10^6$ hactars
Barren land	= $36 \times 10^6$ hactars
Agricultural land	= $250 \times 10^6$ hactars
Total energy on land area	= 1750 TW
Biomass produced @ (0.4% $\eta$ )	= 0.7 TW
Exergy requirement of India	= 0.4 TW
Land requirement with 0.4% $\eta$	= $143 \times 10^6$ hactars (57%)
Land requirement with 3% $\eta$	= $7.6 \times 10^6$ hactars
Land requirement with 4.5% $\eta$	= $5.1 \times 10^6$ hactars (1.5% of total land area)

## OPPORTUNITY -2(BIOMASS PYROLYSIS)



## AGRICULTURAL PRODUCTIVITY

S.No.	Product	Average yield, India (2010) (tonnes per hectare)	World's most productive farms (2010) (tonnes per hectare)
1	Rice	3.3	10.8
2	Wheat	2.8	8.9
3	Mangoes	6.3	40.6
4	Sugar cane	66	125
5	Bananas	37.8	59.3
6	Cotton	1.6	4.6
7	Fresh Vegetables	13.4	76.8
8	Potatoes	19.9	44.3
9	Tomatoes	19.3	524.9
10	Soyabean	1.1	3.7
11	Onions	16.6	67.3
12	Chick peas	0.9	2.8
13	Okra	7.6	23.9
14	Beans	1.1	5.5

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**OPPORTUNITY -3(ENERGY  
EFFICIENT COOKING PRACTISE)**



**IMPROVED STOVES FOR  
BIOMASS**

IMPROVED STOVES FOR BIOMASS	
1.	No. of families using biomass Cook stoves <b>18.2 crores</b>
2.	Time needed for collection of biomass <b>16 hrs/Week</b>
3.	Current thermal efficiency <b>12 %</b>
4.	Improved thermal efficiency <b>36 to 40%</b>

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5.	Time required for collection of biomass	<b>5 hrs/Week</b>
6.	Available time for other job will be 11hrs and @ Rs. 20/hr	<b>220 Rs./Week 11,000 Rs./Year</b>
7.	Wealth generation	<b>2 Lakh crores</b>

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1-1

**By Using Garden Waste**

**Pellet**

- Pellet Used=1800+300
- Fan RPM = 1700
- Burn Time =106 min
- Max. Flame Temp = 839°C
- Max Flame Height = 260 mm = 350mm For 3 Min
- Ash Weight =275 gm
- Ash % = 13.09
- Smoke comes from ash tray for 29 min



Temperature of flame: 1020°C



Temperature of the flame: 980°C



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**USABILITY : 30 lit and 120 lit cooker assembly**

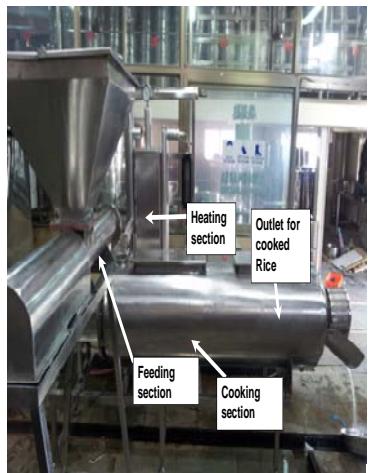


**Continuous  
Cooker**

33

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## Actual System



35

Continuous cooker trial in front of Bajaj people



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1. Annual Reviews in Chemical and Biomolecular Engineering 6, 347-378 (2015)
2. Journal of Fluid Mechanics 742, 368-424 (2014)
3. International Journal of Computational Fluid Dynamics 24, 109-120 (2010)
4. Chemical Engineering Science 92, 1-12 (2013)

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## SOLAR ENERGY

Sr. No.	Electricity Generation	MW	Land Required
1.	Basis	1	6 Ha
2.	Present Electricity Generation Capacity In India	150,000	0.9 MHa
3.	Expected Electricity Generation in 2050	1,500,000	9.0 MHa
<b>LAND IN INDIA</b>		<b>330 MHa</b>	
<b>LAND REQUIREMENT FOR 1.5 TW</b>		<b>2.7%</b>	

Completely Uncultivated barrel land in India is 16%



## OPPORTUNITY - 7 (WIND ENERGY)

➤ Available wind power is estimated to be **72 TW**, more than enough to supply the world's needs. The major constraint here is it's **intermittency** and the **remoteness** of most windy regions from dense population concentrations. However it has been the experience over the last decade that wind power has become competitive with **coal fired thermal power** and **unsubsidized wind power** installations are actually *cheaper* than new coal-based power plants in some places.



## FORWARD PATH

1. I have cited several examples of win-win-win ..... situations
2. The confidence of " We can generate new knowledge"
3. The habit confidence of innovativeness to generate huge wealth for the cause of the nation.
4. Clarity of purpose, Commitment and hard work
5. Perseverance, patience and humbleness
6. Balance between self and society, which results into "creative ambience"
7. Energy and time balance

## OPPORTUNITY - 9 (ATOMIC ENERGY)



1. Present U capacity = 5000 MW of PHWR (mined and recycled)
2. Recycled Plutonium : 40,000 to 100,000 MW FBR from 10,000 MW PHWR
3. Bring down the present capital cost from 8 Cr/MW to 6 Cr/MW
4. Develop process and equipment design for the processing of spent fuel
5. The objective is to produce electricity @ Rs. 2.7 /kWH

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## SUMMARY



In 1947, we received political freedom.

However, we are more than 90 % dependent in terms of technologies and new knowledge.

We need to begin with yet another freedom fight for own abundant knowledge, innovations and wealth

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## **Chapter 1**

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### **Authorities of the University**



## Chapter 1

### Authorities of the University

The Annual Report of the Dr. Babasaheb Ambedkar Technological University for the year ending on 31<sup>st</sup> March, 2016 has been prepared as per the directives of the Executive Council.

Chancellor	: His Excellency Shri. C. Vidyasagar Rao
Vice-Chancellor	: Dr. W.N. Gade (2 <sup>nd</sup> March, 2015 to 2 <sup>nd</sup> March, 2016)
Vice-Chancellor	: Dr. V.G. Gaikar (2 <sup>nd</sup> March, 2016 till date)

#### **1.1 Authorities of the University:**

##### **i) Executive Council (1<sup>st</sup> July, 2015 – 29<sup>th</sup> February, 2016)**

S.N.	Name	Designation
1	Vice Chancellor	Chairman
2	Shri. Pramod Naik	Member
3	Dr. O.G. Kakade	Member
4	Dr. S.L. Nalbalwar	Member
5	Dr. M.A. Dabhade	Member
6	Dr. V.G. Sargade	Member
7	Prof. V.P. Jawanjal	Member
8	Prof. U.N. Gaitonde	Member
9	Dr. R.N. Mohanty	Member
10	Dr. P.D. Porey	Member
11	Dr. Mrs. Ashwini S. Kunte	Member
12	Registrar	Secretary

##### **Executive Council (1<sup>st</sup> March, 2016 onwards)**

S.N.	Name	Designation	Position
1	Professor V.G. Gaikar	Vice-Chancellor	Chairman
2	Dr. S.K. Mahajan	Director of Directorate of Technical Education (or his representative)	Member
3	Professor G.D. Yadav	Nominee of the Chancellor	Member
4	Yet to be appointed	One representative of Deans	Member
5	Prof. P.V. Vijay Babu Prof. P.K. Brahmankar	Two representatives of the Heads of the University Departments and Heads of conducted institutions	Members
6	Yet to be affiliated	Ten representative of Heads of affiliated colleges and recognized institutions	Members
7	Yet to be formed	Four Representatives of the Regional Centers	Members
8	Prof. M.S. Tandale Prof. S.V. Khobragade	Two Teachers of the University, one from among professors and one from among assistant professors	Members
9	Yet to be formed	Three Representatives of the Sub Centers	Members
10	Padmashree Milind Kamble Shri. Pramod Chaudhary Dr. Vivek Vadke Prof. Anand Kusre	Four Eminent scientists or renowned technologists	Members
11	Prof. A.W. Kiwelekar	I/c Registrar	Secretary

**ii) Academic Council (1<sup>st</sup> July, 2015 – 29<sup>th</sup> February, 2016)**

S.N.	Name	Position
1	Vice-Chancellor	Chairman
2	Dr. P.V. Vijay Babu	Member
3	Prof. V.P. Jawanjal	Member
4	Dr. S.L. Nalbalwar	Member
5	Dr. P. K. Brahmankar	Member
6	Dr. P. K. Katti	Member
7	Dr. A.W. Kiwelekar	Member
8	Prof. S.M. Jadhav	Member
9	Dr. S. M. Pore	Member
10	Dr. M.A. Dabhadé	Member
11	Prof. G.D. Yadav	Member
12	Director, TIFR	Member
13	Principal, LBS College of Advanced Maritime Studies & Research	Member
14	Executive Director, RCF, Chembur	Member
15	Dr. V.G. Gaikar, ICT, Mumbai	Member
16	Dr. S.S. Joshi, IIT Bombay	Member
17	Dr. B.N. Chaudhari, CoE, Pune	Member
18	Dr. M.S. Sutaone, CoE, Pune	Member
19	Dr. V.G. Sargade	Member
20	Dr. H.A. Mujawar	Member
21	Dr. B.B. Singh	Member
22	Dr. P.B. Lokhande	Member
23	Registrar, Dr. BATU, Lonere	Member-Secretary

**Academic Council (1<sup>st</sup> March, 2016 onwards)**

S.N.	Name	Designation	Position
1	Prof. V.G. Gaikar	Vice-Chancellor	Chairman
2	No appointment	Dean/ Director of Research and Development	Member
3	No appointment	Deans of Faculties (Engineering & Technology, Pharmacy, Architecture, HMCT)	Members
4	No appointment	All Heads/ Directors of the Regional Centers	Members
5	No appointment	Joint Directors of Sub Centers of the University	Members
6	Prof. P. V. Vijay Babu Prof. P. K. Brahmankar Dr. A.W. Kiwelekar Dr. K. Vadirajacharya Dr. S. M. Pore Dr. S. M. Jadhav Dr. S L. Nalbalwar Prof. V.P. Jawanjal Dr. B. B. Singh Dr. L. N. Singh Dr. A. P. Shesh Dr. H. A. Mujawar Dr. M. A. Dabhadé	Heads of University Schools and Departments	Members
7	No recognized Institute	Two Heads of Recognized Institutions, to be nominated by the Vice-Chancellor	Members
8	No affiliated colleges	Ten Principals of the affiliated colleges	Members
9	Mr. U. V. Dhatrak, Executive Director, RCF, Thal Unit	Chairman or his representative, Rashtriya Chemicals and Fertilizers, Mumbai	Member
10	Prof. P.V. Vijay Babu Prof. P. K. Brahmankar Dr. A. W. Kiwelekar Dr. K. Vadirajacharya	Chairmen of all Boards of Studies	Member

	Dr. S.M. Pore Dr. S.L. Nalbalwar Dr. S.M. Jadhav Dr. Mrs. Padma Devarajan Mr. Prashant Deshmukh		
11	Prof. J.V. Aghav Prof. Y.V. Joshi Dr. V. M. Bhandari Dr. Nitin Deshmukh Dr. R. Balasubramanium Mr. Samir Rane Prof. Dr. Mohan Khedkar Prof. V. K. Rathod Prof. M. B. Kumthekar	Ten experts from different branches of technology, to be nominated by the Vice-Chancellor	Members
12	Prof. M.S. Tandale Dr. L.N. Singh Prof. S.V. Khobragade	Three teachers, one from amongst professors, one from amongst Associate professors and one from among Assistant professors of the University by rotation according to their seniority, to be nominated by the Vice-Chancellor	Members
13	Dr. V.G. Sargade	Registrar	Secretary

**iii) Planning and Evaluation (Monitoring) Board (1<sup>st</sup> July, 2015 – 29<sup>th</sup> February, 2016)**

S.N.	Name	Position
1	Vice-Chancellor	Chairman
2	Dr. P.D. Porey	Member
3	Dr. M.J. Rathod	Member
4	Dr. V.V. Mahajani	Member
5	Dr. B.M. Naik	Member
6	Dr. J.P. Modak	Member
7	Registrar, Dr. BATU, Lonere	Member-Secretary

**Planning and Evaluation (Monitoring) Board (1<sup>st</sup> March, 2016 onwards)**

S.N.	Name	Qualification	Position
1	Prof. V. G. Gaikar	Vice-Chancellor	Chairman
2	Dr. S. K. Mahajan	Director of Technical Education or his representative, not below the rank of Joint Director	Member
3	Prof. G. D. Yadav	Chancellor's nominee on the Executive Council	Member
4	Yet to be appointed	Four representatives of the Regional Centers	Members
5	Yet to be appointed	Five representatives of the Sub Centers	Members
6	Prof. P.V. Vijay Babu Prof. A.W. Kiwelekar	In charge of Research and Development or the In charge of Academics	Invitees
7	Yet to be appointed	Two members as experts in Planning and Evaluation, to be nominated by the Executive Council	Members
8	Mr. Prashant Deshmukh Mr. Sameer Rane	Two members as expert in Planning and Evaluation, nominated by the Academic Council	Members
9	Dr. A.W. Kiwelekar	I/c Registrar	Secretary

**iv) Finance Committee (1<sup>st</sup> July, 2015 – 29<sup>th</sup> February, 2016)**

S.N.	Name	Position
1	Vice-Chancellor	Chairman
2	Dr. O.G. Kakade	Member
3	Dr. S.L. Nalbalwar	Member
4	Prof. U.N. Gaitonde	Member
5	Director, Technical Education	Member
6	Representative of AICTE	Member
7	Registrar	Member
8	Finance Officer	Member-Secretary

**Finance Committee (1<sup>st</sup> March, 2016 onwards)**

S.N.	Name	Qualification	Position
1	Prof. V.G. Gaikar	Vice-Chancellor	Chairman
2	Dr. S. K. Mahajan (or his nominee)	Director of Technical Education or his representative, not below the rank of Joint Director	Member
3	Dr. Ramesh Unnikrishnan	Representative of the All India Council of Technical Education Director, WRC, AICTE	Member
4	Yet to be appointed	Four representatives of the Regional Centers	Members
5	Yet to be appointed	Three representatives of the Sub Centers	Members
6	Dr. S.M. Pore Dr. S.L. Nalbalwar	Two members from Dean of Research and Development and Deans of Faculty	Invitees
7	Professor G. D. Yadav	Two members, to be nominated by the Executive Council from amongst its members, one of whom shall be the nominee of the Chancellor on the Executive Council	Members
8	(to be nominated by the Government)	One person nominated by State Government	Member
9	Dr. A.W. Kiwelekar	I/c Registrar	Member
10	Dr. V.S. Sathe	I/c Finance Officer	Secretary

**v) List of members of the University's other Committees Chapter IV of 32(1)**

**a) Building and Works Committee (1<sup>st</sup> July, 2015 – 29<sup>th</sup> February, 2016)**

S.N.	Name	Position
1	Vice-Chancellor	Chairman
2	Dr. O. G. Kakade	Member
3	Shri. V. D. Chhatre	Member
4	The Superintending Engineer	Member
5	The Executive Engineer	Member
6	The Registrar	Member
7	The Finance Officer	Member
8	Shri. V. S. Chavan	Member-Secretary

**Building and Works Committee (1<sup>st</sup> March, 2016 onwards)**

S.N.	Name	Composition	Position
1	Prof. V.G. Gaikar	The Vice-Chancellor or Director- Administration in his absence	Chairman
2	Prof. G.D. Yadav	The Chancellor's Nominee on the Executive Council	Member
3	Superintending Engineer of PWD	Superintending Engineer of the Public Works Department in-Charge of the territorial circle in which the University is located	Member
4	Mr. V.B. Satpute Executive Engineer	Executive Engineer of the Public Works Department In-Charge of the territorial circle in which the University is located	Member
5	Mr. Shashank Mehendale	One eminent Engineer from the Private Sector subject to approval of Executive Council	Invitee Member
6	Mr. Prashant Deshmukh	One eminent Architect from the Private Sector nominated by the Chancellor	Invitee Member
7	Dr. A.W. Kiwelekar	I/c Registrar	Member
8	Dr. V. S. Sathe	I/c Finance Officer	Member
9	Prof. S. M. Pore Prof. S. L. Nalbalwar Prof. K. Vadirajacharya	Three Heads of the University Departments	Members
10	Mr. V. S. Chavan	University Engineer	Member Secretary
11	Shri. V.D. Chhatre	One nominated member of Executive Council	Invitee Member

**Sub-committee of Buildings and Works Committee**

S.N.	Name	Position
1	Vice-Chancellor	Chairman
2	Two members of the Buildings and Works Committee Dr. S.M. Pore Dr. S.L. Nalbalwar	Members
3	Finance Officer	Member
4	University Engineer	Member Secretary

**b) Purchase Committee (1<sup>st</sup> July, 2015 – 29<sup>th</sup> February, 2016)**

S.N.	Name	Position
1	Vice-Chancellor	Chairman
2	Dr. P. K. Katti	Member
3	Dr. S. L. Nalbalwar	Member
4	The Registrar	Member
5	Dr. P. V. Vijay Babu	Member
6	Dr. P. K. Brahmankar	Member
7	Dr. V. P. Jawanjal	Member
8	The Finance Officer	Secretary
9	Mr. G. H. Kalsekar	Special Invitee

**Purchase Committee (1<sup>st</sup> March, 2016 onwards)**

S.N.	Name	Qualification	Position
1	Prof. V.G. Gaikar	The Vice-Chancellor; or Director-Administration in his absence	Chairman
2	Prof. P. V. Vijay Babu Dr. S. L. Nalbalwar Dr. S. M. Jadhav	Three Heads of the Departments nominated by the Vice-Chancellor	Members
3	Prof. Anand Kusare Prof. S.V. Khobragade	Two Members of Executive Council	Members
4	Dr. A.W. Kiwelekar	I/c Registrar	Member
5	Dr. V. S. Sathe	I/c Finance Officer	Member Secretary

S.N.	Sub-Committee of Purchase and Sales Committee		
1	Dr. V.G. Sargade	Till the appointment of Director-Administration	Chairman
2	Two members of Purchase Committee nominated by the Vice Chancellor Dr. S.L. Nalbalwar Dr. S.M. Jadhav		Members
3	Finance Officer		Member Secretary

**vi) Library Committee (1<sup>st</sup> July, 2015 – 29<sup>th</sup> February, 2016)**

S.N.	Name	Position
1	Vice-Chancellor	Chairman
2	Dr. P. K. Brahmankar	Member
3	Dr. P.V. Vijay Babu	Member
4	Dr. P.K. Katti	Member
5	Dr. S.L. Nalbalwar	Member
6	Dr. V. P. Jawanjal	Member
7	The Registrar	Member
8	Shri. S. P. Vaidya, Librarian	Secretary

### **Library Committee (1<sup>st</sup> March, 2016 onwards)**

S.N.	Name	Qualification	Position
1	Prof. V.G. Gaikar	Vice-Chancellor	Chairman
2	To be appointed	Three Heads of University schools nominated by the Vice-Chancellor	Members
3	Dr. M.A. Dabhade Dr. S.L. Nalbalwar Prof. V.P. Jawanjal	Three Heads of departments nominated by the Vice-Chancellor	Members
4	Dr. V.J. Bansod Dr. R.P. Kate	Two teachers, to be nominated by the Executive Council	Members
5	Dr. A.W. Kiwelekar	I/c Registrar	Member
6	Dr. S.P. Vaidya	Librarian	Secretary

### **1.2 Admission Procedure**

#### **Graduate Degree:**

Admissions to the degree courses are given according to the rules framed by the Government from time to time and through the centralized admission procedure. Admissions to 85% of seats are given through the centralized admission system and 15% of the seats are reserved for students from Konkan area i.e. Thane, Raigad, Ratnagiri and Sindhudurg. Seats reserved for backward classes, female students and for other category are according to the Government of Maharashtra rules. Students from other states are also admitted as per the notification by the Ministry of Human Resource Development, Government of India.

#### **Diploma:**

Admissions for seats for the diploma courses are allotted according to the rules framed by the Government from time to time. Presently the admissions are made through the centralized admission system. Accordingly, 70% of the seats are reserved for students from Raigad district. The remaining 30% of seats are for students from rest of Maharashtra. Seats reserved for backward classes, female students and for other categories are according to the Government rules. Students from other states are also admitted as per the notification issued by the Ministry of Human Resource Development, New Delhi.

#### **Postgraduate Degree:**

Admissions for the postgraduate courses are given by advertising in the leading newspapers. The available courses for Postgraduate studies are Chemical Engineering, Mechanical Engineering, Electrical Engineering, Electronics & Telecommunication Engineering and Computer Engineering. The candidates with GATE qualifications are selected on merit basis. The remaining candidates are selected through the examination conducted by the respective departments. After scrutiny of the applications and written examination, interviews are conducted for the selection of eligible students. Reservation for backward and other categories is provided according to the government rules. These courses are presently being conducted on non-grant basis.

#### **Advanced Diploma: (Water Quality Management)**

Out of total 20 seats of this course, 10 seats are reserved for the sponsored candidates. Admissions for the remaining 10 seats are given according to the Government rules about reservations. The course is conducted on non-grant basis and eligibility condition for admission is diploma in engineering or bachelor's degree in Chemistry.

### **1.3 Courses Offered at a Glance**

#### **(i) B. Tech. Courses**

S.N.	Name of the Course	Admission capacity	Duration in years	Year of starting
1	Petrochemical Engineering	60	04	1989
2	Mechanical Engineering	60	04	1992
3	Chemical Engineering	60	04	1992
4	Computer Engineering	60	04	1995
5	Electronics & Telecommunication Engineering	120	04	1995
6	Electrical Engineering	60	04	1995
7	Information Technology	60	04	2001
8	Civil Engineering	60	04	2008

**ii) M. Tech. Courses**

S.N.	Name of the Course	Admission capacity	Duration in years	Year of starting
1	Chemical Engineering	18	02	2001
2	Computer Engineering	18	02	2001
3	Electronics & Telecommunication Engineering	18	02	2001
4	Environmental Engineering	18	02	2002
5	Manufacturing Engineering	18	02	2002
6	Thermal & Fluids Engineering	18	02	2003
7	Power System Engineering	18	02	2008

**iii) Diploma**

S.N.	Name of the Course	Admission capacity	Duration in year	Year of starting
1	Chemical Engineering	60	03	1982
2	Petrochemical Engineering	60	03	1993
3	Polymer & Plastic Engineering	60	03	1993
4	Instrumentation Engineering	60	03	1994
5	Computer Engineering	120	03	1995
6	Electrical Engineering	60	03	1995
7	Electronics & Telecommunication Engineering	60	03	1995
8	Information Technology	60	03	2001

**iv) Advanced Diploma**

S.N.	Name of the Course	Admission Capacity	Duration in years	Year of starting
1	Advanced Diploma in Water Quality Management	20	1 ½	1998

**1.4 Campus**

The University is developed in a beautiful campus of 470 acres. It is located at National Highway No. 17 at Lonere in Konkan region of Maharashtra State. The University is about 160 km in the south of Mumbai and 120 km in the west of Pune city; the nearest railway station is Mangaon, 10 km from the University campus. The University is the first autonomous Technological University of the state. We have been attracting students with excellent academic credentials from all over Maharashtra and mould them into engineers and technocrats with ability to excel in diverse engineering fields.

There are five hostels of total capacity of 1500 and 100% accommodation is provided to girl students. We have a Computer centre with 100 terminals and campus wide local area network extending from academic area to hostels and faculty residence. Free Book Bank facility is available for backward category students. An extension counter of State Bank of India and ATM are available on campus. A facility for photocopying on payment is available on campus. Other stationary items and eatables are available in the Society Store and canteens in the University campus.

**1.5 Evaluation of the University by NAAC**

University had applied for its certification by National Assessment and Accreditation Council (NAAC), Bangalore in April 2014. The peer team visited the University during 04 and 07 February, 2015 for its assessment. The University has been awarded 'B' grade for its overall performance by the council.





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## **Chapter 2**

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### **Departments of University**

- 2.1 Department of Chemical Engineering
- 2.2 Department of Civil Engineering
- 2.3 Department of Computer Engineering
- 2.4 Department of Electrical Engineering
- 2.5 Department of Electronics & Telecommunication Engineering
- 2.6 Department of Information Technology
- 2.7 Department of Mechanical Engineering
- 2.8 Department of Petrochemical Engineering
- 2.9 Department of Chemistry
- 2.10 Department of Mathematics
- 2.11 Department of Physics
- 2.12 Department of English



## Chapter 2

### Departments of University

# Department of Chemical Engineering



**Dr. P.V. Vijay Babu**  
**Professor & Head**

#### **Message from Head of Department**

It gives me immense pleasure to present the annual report of the Chemical Engineering department. The department strives to impart good quality education coupled with imbibing good culture to the students. As a result of which the students passing out from the department are doing extremely well in the industries and academia.

Apart from imparting good quality education students are encouraged to participate in sports and extracurricular activities which will help them for their holistic development. Students are also encouraged to attend GATE, GRE and CAT examinations so as to pursue higher education. Our students have been performing extremely well in games and sports. Our students are very active in NCC, NSS and cultural activities.

The Department provides all kinds of guidance for their higher studies and professional career. GATE guidance classes are conducted for the students. Chemfraternity, a technical festival of the department, is a special attraction for the students. Students gain good experience of coordinating different activities during Chemfraternity. The department is very keen to arrange expert lectures to the students by inviting eminent speakers from IITs, ICT and NITs. The department maintains excellent rapport with the nearby industries in Mahad, Roha, Lote Parshuram and Patalganga.

The department will continue to support and encourage all the students for their overall development in the field of Chemical Engineering and prepares them to face challenges at global level.

**Dr. P.V. Vijay Babu**

#### **1. Vision and Mission Statements for Department**

##### **Vision:**

The vision of the department is to get national recognition for undergraduate Chemical Engineering program coupled with research strengths in the areas of Heat Transfer, Systems Engineering, Mass Transfer with Chemical Reactions and Biochemical Engineering.

##### **Mission:**

We provide a high-quality education experience that will prepare graduate to assume leadership positions within chemical and other associated industries. We foster and encourage the pursuit of new knowledge and innovative scholarship in chemical sciences and engineering. We provide leadership to the Chemical Engineering profession through dedicated teaching and service.

#### **2. About the Department:**

The department of Chemical Engineering was established in the year 1992 with B. Tech. program having an intake of 60 students. During the year 2000, M. Tech. program in Chemical Engineering and during 2001 M.Tech program in Environmental Engineering with intake of 18 students each, were introduced. The department has also started Ph.D. program from the academic year 2003 and the department has the distinction of producing first Ph.D. in the University. Currently 12 research scholars are pursuing their Ph.D. program.

The department has a dedicated team of faculty members. Majority of the faculty members are Ph.D. holders. The department has collaboration with ICT Mumbai to carryout innovative research programs. The focus of the department is to produce high quality engineers with strong fundamentals in Chemical Engineering.

The department maintains excellent rapport with nearby chemical industries. The department actively participates in the TEQIP program, a world bank assisted quality improvement program. The department has also received funding from AICTE, UGC, ONGC and DST for various research projects. The department has very good analytical facility to support the research projects.

Majority of the students passed out from the department are doing extremely well in industry and academia. During last two academic years some of our students are placed in industries like Technoforce Consulting Engineers, JSW Ispat Ltd., Technimont ICB Ltd., Cognizant, Palladian Consultants, Privi Organics Ltd., etc.

A good number of students of this department compete in the competitive examinations like GATE, CAT, TOFEL, and GRE. Many students go abroad to pursue higher education. As per the curriculum requirements, the students have to undergo industrial exposure and industrial training at the end of second and third years of B.Tech program, respectively. The department also organizes industrial visits to the nearby Chemical industries for better understanding of the theoretical aspects. Students are encouraged to participate in conferences, seminars, workshops, paper publications, annual sports, etc. The department and the Chemical Engineering Association (ChEA) regularly organize “Chemfraternity”, a state level technical festival, with the support of industries.

### **3. Program Educational Objectives (PEOs) & Program Outcomes (POs)**

#### **Program Educational Objectives**

<b>Objective Identifier</b>	<b>Objectives</b>
<b>PEO1</b>	To provide knowledge of sound mathematical principles underlying various concepts of Chemical Engineering.
<b>PEO2</b>	To develop ability to understand complex issues in the analysis, design, implementation and operation of Chemical Engg. Systems.
<b>PEO3</b>	To provide knowledge of mechanisms for building large-scale Chemical-based systems.
<b>PEO4</b>	To develop ability to provide Engineering-based solutions to the problems from other disciplines of science and engineering.
<b>PEO5</b>	To impart skills necessary for adapting rapid changes taking place in the industries.
<b>PEO6</b>	To provide knowledge of ethical issues arising due to deployment of new technologies in the society on large scale.

#### **Program Outcome (POs)**

<b>Outcome Identifier</b>	<b>Outcomes</b>
<b>PO1</b>	The graduates will possess the knowledge of various discrete mathematical structures and numerical techniques.
<b>PO2</b>	The graduates will demonstrate the use of Logic in representing and reasoning knowledge based systems.
<b>PO3</b>	The graduates will have ability to apply mathematical formulae to analyze the problems.
<b>PO4</b>	The graduates will have knowledge of design software and concepts essential to implement this software.
<b>PO5</b>	The graduates will have ability to analyze problem, specify the most feasible solutions to them and to evaluate alternative solutions.
<b>PO6</b>	The graduates will have in-depth knowledge of core subjects of Chemical Engineering.
<b>PO7</b>	The graduates will have broad understanding of the impact of Chemical Engineering solutions in economic, environmental and social context.
<b>PO8</b>	The graduates will demonstrate use of analytical tools in gathering requirements to provide feasible solutions.

- PO9** The graduates will have knowledge of design rules and patterns necessary to formulate concept based solutions.
- PO10** The graduates will demonstrate the ability to build human centric interfaces to design tools.
- PO11** The graduates will have ability and attitude to address the ethical issues.
- PO12** The graduates will demonstrate the ability to work and collaborate in heterogeneous streams.
- PO13** The graduates will possess skills necessary to communicate design engineering ideas. The skills set include verbal, writing and listening skills.

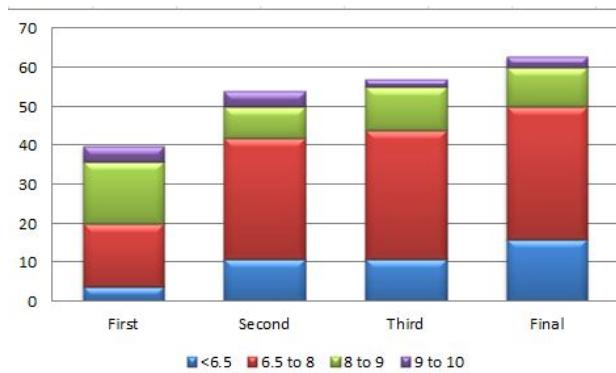
#### 4. Overview of Academic Programs

Academic Program		Duration	Intake
<b>Undergraduate</b>			
Bachelor of Technology (B.Tech)	Chemical Engineering	Four Years	60
<b>Postgraduate</b>			
Master of Technology (M.Tech)	Chemical Engineering	Two Years	18
Ph.D.	Chemical Engineering		12 Currently registered

#### 4.1 UG Students Statistical Information:

Year	OPEN	OBC	SC	ST	VJ/NT	SBC	ESBC	TFWS	PH	Male	Female	Total
First	18	19	10	2	8	4	0	2	0	50	13	63
Second	24	22	12	3	11	2	0	0	0	54	20	74
Third	18	23	9	2	7	5	5	0	0	49	20	69
Final	33	19	10	4	11	3	0	0	1	54	27	81

#### 4.2 Result Analysis:



Number of passing undergraduates in each year of the course are as shown for current academic year.

#### 4.3 Campus Placements:

S.N.	Name of the student	Name of Organization
1	Bhelonde Vaibhav	Technoforce Solutions (I) Pvt. Ltd., Nasik
2	Khanvilkar Shubadha	Technoforce Solutions (I) Pvt. Ltd., Nasik
3	Kelkar Varad	Supreme Petrochem Ltd., Village Amdoshi, Nagothane
4	Bandarkar Noaman	Supreme Petrochem Ltd., Village Amdoshi, Nagothane
5	Suryawanshi Mandar	Supreme Petrochem Ltd., Village Amdoshi, Nagothane
6	Khambe Ankit	Privi Organics Ltd., Mahad
7	Vidhate Prithviraj	Privi Organics Ltd., Mahad

## 5. Faculty and Staff

### Faculty:



Dr. P. V. Vijay Babu  
Professor of Chemical Engg.  
B.Tech. NIT Warangal, 1984  
M.Tech. NIT Warangal, 1987  
Ph.D., IIT Bombay, 1992



Dr. Vivek S. Sathe  
Associate Professor  
B.E. (Chemical Engg.) Pune  
University

M.Tech. (Chemical Engineering)  
IIT, Bombay

Ph.D. IIT, Madras

Prof. A. M. Ghugal  
Associate Professor  
B.Tech (Chemical Engineering)  
LIT, Nagpur  
M.Tech. (Petrochemical  
Engineering) LIT, Nagpur



Dr. Yogesh S. Mahajan  
Associate Professor  
B.E (Chemical Engineering)  
Mumbai University  
M.Tech (Chemical Engineering)  
IIT, Bombay  
Ph.D. IIT, Bombay



Prof. Mrs. Suvarna Dhongade  
Assistant Professor  
B.Tech (Chemical Engineering)  
JDIT, Amaravati University  
M.Tech (Chemical Engineering)  
Dr. BATU Lonere



Dr. Abhijit R. Chavan  
Associate Professor  
B.Tech (Petrochemical  
Engineering)  
Dr. BATU Lonere  
M.Tech. (Chemical Engineering)  
IIT, Kanpur  
Ph.D. IIT, Bombay



Prof. Ajay P. Wankhede  
Assistant Professor  
B.E. (Chemical Engineering)  
JDIT, Yavatmal  
M.Tech (Chemical Engineering)  
NIT, Trichy

### Adhoc faculty



Prof. Shivanand S. Chavan  
Assistant Professor  
B.Tech (Chemical Engineering)  
Dr. BATU Lonere  
M.Tech (Chemical Engineering)  
NIT, Trichy



Mr. B. D. Bairagi  
Lab Technician



Mr. Y. N. Kamble  
Lab Technician



Mr. S. D. Patil  
Lab Technician



Mr. P. B. Thale  
Peon

## 6. Additional Responsibilities to the Faculty

### Dr. P.V. Vijay Babu

1. Member of Academic Council
2. Member Secretary, DBATU Act 2014 modification committee
3. Member, Campus Development Committee
4. Co-ordinator, DBATU-GexCon Collaborative Program on Safety
5. Member, New Grading system drafting committee

6. Member of University Library Committee
7. Member of University Finance Committee
8. Convener of Industry-Institute Interaction Cell of the University
9. Chairman, BoS
10. Chairman, Research Committee in Chemical and Petrochemical Engineering
11. Member of Central Purchase Committee
12. Co-ordinator for committee to propose amendments in Rules and Regulations for Ph. D. Program

**Dr. V.S. Sathe**

1. In-charge Finance Officer

**Dr. Y.S. Mahajan**

1. Member of Statutes drafting committee
2. Co-ordinator, DBATU-ICT collaborative research program in Chemical Engineering
3. Compared the University Convocation
4. Arranged workshop on Python and Latex for the benefit of students (February 2016)
5. Organized an FDP on Recent Trends in Energy Research, under TEQIP-II, 15

**Dr. A.R. Chavan**

1. Member, University Annual Report Preparation Committee
2. Co-ordinator, DST FIST Project

**8. Advisory Board:**

To provide guidance to the department, Advisory Board has been constituted. The Advisory Council/ Board is entrusted with responsibility of conducting academic audit of department, suggesting dynamic curriculum and providing input for research activities. The Advisory Board comprises of the following persons.

S.N.	Name	Position
1.	Head, Chemical Engineering, DBATU, Lonere	Chairman
2.	Dr. Sanjay Mahajani, Professor, Chemical Engineering, IIT Bombay	Member
3.	Dr. Ashwin Patwardhan, Associate Professor, Chemical Engineering, ICT Mumbai	Member
4.	Dr. Ashish V. Orpe, Scientist, Chemical Engineering Division, NCL, Pune	Member
5.	Mr. D.M. Chati, Vice-President (Operations), Embio Ltd., Mahad	Member
6.	Mr. D.R. Degwekar, Vice-President (Operations), Excel Industries Ltd., Roha	Member
7.	Mr. S.B. Pathare, Executive Vice-President (Operations), Privi Organics Ltd., Mahad	Member

**Board of Studies:**

S.N.	Name	Position
1.	Head, Chemical Engineering, DBATU, Lonere	Chairman
2.	Dr. V.R. Patwardhan, Retired Scientist, Chemical Engineering Division, NCL, Pune	Member
3.	Two more members will be Co-opted by the above Committee	

**8. Faculty Research and Publications:**

**Publications/Conferences:**

1. Onkar A. Deorukhkar, Bipin S. Deogharkar, Yogesh S. Mahajan, Purification of tetrahydrofuran from its aqueous azeotrope by extractive distillation: Pilot plant studies, Chemical Engineering and Processing 105 (2016) 79–91
2. Ravindra B. Sholapurkar, Yogesh S Mahajan, Calculation of power generation by rooftop wind turbine an experimental study, Indian Journal of Energy, 5(1) (2016) 1 – 12
3. Ravindra B. Sholapurkar, Yogesh S Mahajan, Review of Wind Energy Development and Policy in India, (2015) Review of Wind Energy Development and Policy in India, Energy Technology & Policy, 2:1, 122-132, DOI: 10.1080/23317000.2015.1101627

4. Ravindra B. Sholapurkar, Yogesh S. Mahajan, Impact of Atmospheric Parameters on Power Generation of Wind Turbine, American Journal of Energy Engineering, 2016; 4(2): 17-25, doi: 10.11648/j.ajee.20160402.12.

## 9. Laboratory

### Major Instruments in Laboratory

S.N.	Name of Major Equipment/Facility	Cost(>Rs.1,00,000)
1	HPLC (High Performance Liquid Chromatograph)	Rs. 16,92,000/-
2	GPC (Gel Permeation Chromatograph)	Rs. 19,00,000/-
3	Prep-LC (Preparative Liquid Chromatograph)	Rs. 17,00,000/-
4	HPTLC (High Performance Thin Layer Chromatograph)	Rs. 17,50,000/-
5	FTIR (Fourier Transform Infra Red Spectrometer)	Rs. 12,00,000/-
6	TGA-DSC (Thermo Gravimetry Analyzer and Differential Scanning Calorimeter)	Rs. 12,50,000/-
7	Brookfield Viscometer	Rs. 1,50,000/-
8	Gas Chromatograph	Rs. 3,60,000/-
9	Gas Chromatograph	Rs. 3,90,000/-
10	Karl Fischer Titrator	Rs. 1,85,000/-
11	Emerson UPS-1 + Batteries	Rs. 1,04,000/-
12	Emerson UPS-2 + Batteries	Rs. 1,05,000/-
13	UV-Visible Spectrometer	Rs. 4,00,000/-
14	Refrigerated Centrifuge	Rs. 5,20,000/-
15	Focused microwave for synthesis	Rs. 21,60,000/-
16	Nitrogen Generator	Rs. 9,95,625/-
17	Diffused Microwave Reactor	Rs. 9,90,000/-
18	Reactor Assemaly for low temperature reaction	Rs. 1,99,660/-
19	Batch Reactor Assembly	Rs. 2,30,625/-
20	Analytical Weighing Balance	Rs. 1,84,275/-
21	Ultrasonic Reactor	Rs. 2,63,350/-

## 10. Projects

### 10.1 Some UG Projects

S.N.	Project Topic
1	Production of Bisphenol A
2	Vapor liquid equilibrium for binary system
3	Simulation of thermochemical cycle
4	Batch kinetics of propionic acid and iso-amyl alcohol (liquid esterification)
5	Vapor liquid equilibrium using ASPEN simulation
6	Separation of glucose and fructose by adsorption
7	Biodiesel production from Algae
8	Design of Prilling Tower
9	Design of Distillation Column
10	Increasing the concentration of 136-Naphthalene trisulfuric acid
11	Study on microbial fuel cell using kitchen waste water as substrate
12	Manufacturing of Dye

### 10.2 PG Projects

S.N.	Project Topic
1	Green Synthesis of AgNP
2	Production of oxalic acid from molasses
3	Kinetic study of esterification reaction of acrylic acid with n-butanol over amberlite
4	Synthesis of methyl butyrate by esterification of butyric acid with methanol using amberlyst-15
5	Production of silica from rice husk ash
6	Isolation and Characterization of Bacteria from oil contaminated soil to produce biosurfactant
7	Modeling and simulation for lactic acid production using suitable micro organisms
8	Modeling and simulation of reactive distillation column for the production of ethyl acetate of highly purity using ASPEN PLUS
9	Optimization of divided wall distillation column using ASPEN PLUS
10	Effect of magnetic field on crystallization of calcium carbonate
11	Synthesis of 2-ethyl hexyl laurate by esterification of lauric acid with 2-ethyl hexanol using

	amberlyst-15
12	Simulation of separation of tetrahydrofuran from its aqueous azeotrope using reactive distillation
13	Esterification of valeric acid with methanol by using amberlyst-15
14	Synthesis of tetrahydrofuran from 1,4-butanediol using reactive chromatography
15	Effect of solvent on particle size of aceclofenac drug using liquid antisolvent technique

## 11. Doctoral Program

### List of Ph.D. Students (Completed/Submitted/Ongoing)

S.N.	Name of the Candidate	Status
1	Mr. N. R. Jawade	Completed
2	Mr. M.W. Barwe	Submitted
3	Mr. V. D. Talnikar	Submitted
4	Mr. R. B. Sholapurkar	Ongoing
5	Mr. R. B. Bhandare	Ongoing
6	Mr. O. A. Deorukhkar	Ongoing
7	Mrs. S. S. Metkar	Ongoing
8	Mr. A. K. Bandsode	Ongoing
9	Mr. S. V. Ranade	Ongoing
10	Mr. Anil Ranveer	Ongoing
11	Mr. S. B. Bobde	Ongoing
12	Mr. P. V. Giri	Ongoing

## 12. Academic Achievements

### List of students Qualified the Gate 2016 Examination is as follows:

S.N.	Name of student	Marks Obtained
1	Mr. Nishad Kadam	35.33
2	Miss. Saroj Gawas	34.67

## 13. Industrial Visit

Department conducted Industrial visit related to various subjects for the benefit of students

### Industrial visit to MRPL, Mangalore:



## 14. Conferences/Workshops/Trainings/ Academic Awareness Activities Conducted under TEQIP-II

- 1) Arranged workshop on Python and Latex for the benefit of students (February 2016)
- 2) Organized an FDP on Recent Trends in Energy Research, under TEQIP-II, Dec. 2015

## 15. Other activities Conducted by Department

**Chemfraternity 2016:** The Department of Chemical Engineering conducted a state level Techfest during March 18-20, 2016. About 120 students from different Engineering colleges in Maharashtra and the students of Dr. Babasaheb Ambedkar Technological University participated in different programs like technical paper and poster presentations, Industrial problem solving, etc.

**GATE coaching:** Every year the Department of Chemical Engineering conducts GATE guidance classes for the students of Chemical and Petrochemical Engineering. Two students from Chemical Engineering have obtained valid GATE score at GATE 2016. GATE score is essential for securing jobs in public sector companies like HPCL, IPCL, BPCL, etc.

**World Water Day Celebration:** Every year the Department of Chemical Engineering conducts World Water Day on March 22. We invited nearby school children to participate in quiz and elocution competitions and also to spread awareness of water conservation through these activities. This year also the Department of Chemical Engineering celebrated World Water Day with great zeal.

**Industrial Exposure and Training programs:** As per the curriculum requirements the students of 2<sup>nd</sup> year B.Tech have to undergo two weeks industrial exposure program during the summer vacation in a processing industry. Similarly, the students of 3<sup>rd</sup> year B.Tech will have to undergo four weeks of industrial training in any chemical process industry during summer vacation. These programs will be highly useful for students to better understand theoretical aspects of Chemical Engineering. During the last summer vacation about 140 students have undergone above programs.

**Training Program on Process Simulation:** About 16 M.Tech students have attended one week training program on Process Simulation at NIT Warangal during the month of May 2016. This training program has been found to be highly useful for the M.Tech student to understand Chemical Process Designs.

**Industrial Tour:** The Department of Chemical Engineering organized an industrial tour for 3<sup>rd</sup> year B.Tech students during 27<sup>th</sup> September and 2<sup>nd</sup> October, 2015. They visited Mangalore Refineries and Petrochemicals Ltd. plant at Mangalore.

**Industrial Visits:** Every year the Department conducts industrial visits for students of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, final year B.Tech and M.Tech students. Students are taken to nearby industries in Mahad, Roha and Lote Parshuram to show them different chemical engineering operations and processes.

## 16. Extra-Curricular Activities

### Cynosure 2K16:



## 17. Departmental Strengths, Weaknesses, Opportunities and Challenges

### Strengths

- Highly dedicated and motivated faculty members.
- Good supporting staff.
- Disciplined students.

### **Weaknesses**

- Insufficient faculty availability.
- Insufficient space.

### **Opportunities**

The department of Chemical engineering maintains excellent rapport with nearby industrial houses, viz. MIDC Mahad, MIDC Roha, MIDC Lote Parshuram, and MIDC Patalganga. In view of this there is a

- Good scope for consultancy work and IRG.
- Good scope for collaborative projects.
- Good scope for expansion of the department.

### **Challenges**

- Managing all Departmental activities with the help of available faculty members.
- Recruitment of qualified faculty members having Ph.D. qualifications.
- Managing with rural environment.

★ ★ ★

## **Department of Civil Engineering**



**Dr. S. M. Pore**  
**Associate Professor & Head**

### **From desk of Head of Department**

It gives me immense pleasure to present Annual Report for Year 2015-16. Seeds sown somewhere around 2008-09 are now showing sprouts and I am sure this will grow to become a landmark in the history of our University. It is well said that beginning of all great things is small, our department is not an exception. Started in 2008 with intake of 60, we have to our credit addition of 320 good civil engineers in service to our nation. From 1<sup>st</sup> batch itself we have tried for on and off campus placement of students and it's our pride that nearly all students are placed. Few students have opted for higher education and did well through IIT, NIT and State Engineering Colleges. In spite of limited facilities on all fronts, department is able to step forward only because of patience and enthusiastic cooperation by students. They have definitely carved a niche on campus. Recognition as a State University will boost morale of every family member of department.

In 2012, Ph.D. programme was introduced. At present 05 research scholars are working in the research area of Structural Engineering and Materials. Fellowship to full time Ph.D. students is available under TEQIP project. B. Tech. curriculum designed is a perfect blend of requirements of AICTE model, syllabus of other universities and real needs of Industries in India. The focus of the department is to produce graduates & post graduates with strong fundamentals needed for application oriented professionals.

The department has received handful amount of funding from AICTE, UGC, TEQIP and State Government for various research projects. The department has required basic laboratories to cater for curricular requirements. Faculty members have strong background of research in current issues of the discipline.

Number of students of this department have succeeded in competitive examinations like GATE, MPSC, UPSC and other. Few students could go abroad to perceive higher studies. As a part of academic schedule, our students need to undergo industrial training at the end of second and third year during summer vacations in industries of repute

around us. The organizations such as PWD, WRD, ZP and few private industries have responded very positively. The department regularly organizes workshops, training, seminars, expert lectures and conference in the emerging areas technology.

Dr. Sachin M. Pore

## **Vision**

Dissemination of technical knowledge and expertise for education of students and progress of industry, society, our country.

## **Mission**

We aim at providing quality engineering education tuned with modern scientific and technological development.  
Department at a Glance:

- Currently running B. Tech. Program and Ph. D. Program
- 04 Part time and 01 Full time Research Scholars
- 289 Undergraduate Students
- 02 Regular and 07 Contract Basis Faculty, 05 Supporting Staff
- 1100 sqm of space, 08 well equipped laboratories, 02 UG Classrooms, 01 PG Room
- 15 Major and 987 minor equipment
- 06 journal papers, 48 conference papers
- 28 students got campus placements, almost all remaining helped out to get placed off-campus
- 06 well equipped laboratories, 15 Major and 987 minor equipment
- 20 consultancy projects, 31 material testing assignments helped IRG of 9.70 Lakhs
- 01 Infrastructure Grant Proposal earned grants of 2.00 Crore from AICTE

### **1. Objectives & Outcomes**

#### **Programme Educational Objectives (PEOs)**

- PEO1** To prepare students to excel in technical fields in order to pursue postgraduate programs or to succeed in industry, R&D institutions through global and new emerging areas.
- PEO2** To provide students with a sound foundation of scientific and engineering fundamentals.
- PEO3** To prepare students to cater changing needs of industry and make them worthy of finding solutions for the real life problems.
- PEO4** To develop in students, professional and ethical attitude, effective communication skills, leadership, teamwork attitude and a responsible citizen.

#### **Programme Outcomes (POs)**

- PO1** The graduate will possess the basic knowledge of science and engineering to identify and formulate problems in industry.
- PO2** The graduate will have an ability to understand methodologies to solve problems in Civil Engineering Industry.
- PO3** The graduate will possess the knowledge of advanced and emerging topics in the fields.
- PO4** The graduate will demonstrate the skills to use modern engineering tools, software and equipment to analyse and solve real-life problems.
- PO5** The graduate will have broad understanding of the impact of Civil Engineering field in economic, environmental and social context and will be aware of the contemporary issues.
- PO6** The graduate will possess skills necessary to communicate engineering ideas.
- PO7** The graduates will demonstrate ability to work and collaborate in heterogeneous teams.
- PO8** The graduates will demonstrate awareness of professional and ethical responsibilities.

## 2. Students Statistical Information

### Enrolment Data for 2015-16

Year	Open		SC		ST		OBC		VJNT		SBC		Total		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
First	20	04	03	03	04	01	14	02	06	03	01	00	48	13	<b>61</b>
Second	19	05	07	03	01	01	23	07	07	02	02	01	57	19	<b>78</b>
Third	19	07	07	05	04	01	12	06	09	02	00	00	51	21	<b>72</b>
Final	25	08	05	04	04	00	18	05	06	02	01	00	59	19	<b>78</b>

### Examination Performance for 2015-16

Year	CGPA				FF	Total
	Below 6.5	6.5 - 8	8 - 9	9 - 10		
First	07	23	11	01	20	<b>62</b>
Second	00	27	11	05	42	<b>85</b>
Third	09	26	11	01	16	<b>63</b>
Final	21	36	07	01	15	<b>80</b>

### 3. Advisory Board and Board of Studies

Advisory Board for Civil Engineering Department is formed to provide time to time guidance and monitor the activities. The Advisory Board is entrusted with responsibility of conducting academic audit of department, suggesting dynamic curriculum and providing input for research activities.

S.N.	Name	Designation	Institute
1	Dr. S. M. Pore	Associate Prof. and Head	DoCE, DBATU
2	Dr. Vipul Prakash	Professor in Civil Engineering	Indian Institute of Technology, Roorkee 247 667
3	Dr. P. H. Sawant	Director	Sardar Patel College of Engg., Mumbai - 58
4	Mr. Khalil Ansari	Chief Engineer Konkan Region	Water Resources Department GoM
5	Mr. R. U. Vasaikar	Executive Engineer	PWD, GoM, Division Palghar
6	Mrs. Dhande K. K.	Manager (QS)	Capacite Infraprojects Pvt. Ltd.,
7	Dr. S. R. Bhagat	Associate Professor	DoCE, DBATU

### Board of Studies for Civil Engineering

Department is entrusted with responsibility academic monitoring, control, and curriculum design for UG and PG Programs. Board functions with due reference to mandatory requirements of AICTE and UGC, latest developments in technology research and industry practices.

S.N.	Name	Designation	Institute
1	Dr. S. M. Pore	Associate Professor and Head	DoCE, DBATU
2	Dr. P. H. Sawant	Director	SPCE, Andheri West, Mumbai - 58
3	Prof. M. B. Kumthekar	Professor in Civil Engineering	Govt. College of Engineering, Karad
4	Dr. D. D. Sarode	Associate Prof. Civil Engineering	ICT, Mumbai
5	Dr. S. R. Bhagat	Associate Professor	DoCE, DBATU

### Investment for Laboratories

S.N.	Name of the Laboratories	Total Cost (Rs.)
1	Survey Laboratory	782278.00
2	Concrete Lab	1218355.00
3	Geotechnical / Soil Lab	1059524.00
4	Hydraulics Lab	122062.00
5	Computational Lab	920989.00
<b>Total</b>		<b>4103208.00</b>

#### 4. Major Instruments in Laboratory

S.N.	Name of Instrument	Qty.	Cost	Date of Purchase
1	Combined set up to demonstrate Bernoulli's Theorem & Type of Flow on the basis of Reynold's number	01	71,250.00	14.12.2010
2	Precision Direct Reading Vernier Theodolite	05	62,500.00	04.02.2011
3	HP pro Desktop SFF 2110, E7500/2GB DDR3 RAM/320 GB HDD/Key board optical mouse	15	4,09,500.00	01.04.2011
4	Trimble M3-5" Total Station	01	4,75,965.00	15.04.2011
5	Direct Shear Outfit with Electronic Microprocessor Loading Unit	01	4,35,490.00	21.03.2013
6	Motorized Sieve Shaker with built in Digital Timer. Standard sets of sieves	01	1,80,136.00	21.03.2013
7	Automatic Compression Testing machine 3000 KN	01	11,73,497.00	27.03.2013
8	Unconfined Compression Test Apparatus	01	90,046.00	21.03.2013
9	Multi Media Projector	03	1,02,195.00	05.10.2015
10	HP 400G1 All-in-one Desktop computer	06	2,33,100.00	05.11.2015

#### 5. Laboratories

The department has fully functional laboratories of Concrete Technology, Hydraulics, Building Construction, and Engineering Geology.



400 Samples of Rocks & Minerals, 150 Models, 150 Charts in Engineering Geology Laboratory



Surveying Instruments, Comp. Testing M/c, Two Tailor-made Hydraulic Benches for 05 Experiments

#### 6. Faculty and Staff

**Dr. Sachin M. Pore**  
B.E. (Shivaji University, Kolhapur),  
M. E. (Shivaji University, Kolhapur),  
Ph.D. (IIT Roorkee)  
Experience: 19 Years



**Dr. Sariputta R. Bhagat**  
B.E. (Amravati University, Amravati),  
M. Tech. (IIT Delhi),  
Ph. D. (IIT Roorkee)  
Experience: 18 Years



**Ms. Akansha A. Darge<sup>#</sup>**  
B.Tech. (DBATU, Lonere)  
M.E. (SFPU, Pune)  
Experience: 03 Years



**Prasad G. Sonar<sup>#</sup>**  
B. Tech. (DBATU, Lonere)  
Experience: 02 Years



**Kiran B. Thombre<sup>#</sup>**  
B. Tech. (DBATU, Lonere)  
Experience: 02 Years



**Ranjit N. Kore<sup>#</sup>**  
B. Tech. (DBATU, Lonere)  
Experience: 01 Year



**Ms. Priyanka P. Mohire<sup>#</sup>**  
B.Sc., M.Sc. (Geology) (SFPU, Pune)  
Experience: 03 Years



**Rahul B. Yendole<sup>#</sup>**  
B. Tech. (DBATU, Lonere)  
Experience: 02 Years



**Prashant S. Pawar<sup>#</sup>**  
B. Tech. (DBATU, Lonere)  
Experience: 01 Year



**Prashant R. Jagtap<sup>\$</sup>**  
B.E., M. E. (Shivaji University,  
Kolhapur),  
Ph.D. (ongoing at DBATU, Lonere)  
Experience: 05 Years



## Supporting Staff

**Govind V. Jadhav**  
Laboratory Assistant  
B.A., M. A. (DBAMU,  
Aurangabad)  
Experience: 07 Years



**Sandesh M. Jambhare<sup>#</sup>**  
Laboratory Assistant  
B.Sc. (Mumbai University)  
Experience: 02 Years



# indicates faculty on contract basis, \$ indicates staff on contract basis

## 7. Contributions of Faculty

1. Department actively participated in preparations for NAAC Peer team visit during 04 and 07 Feb. 2015. University could secure award of grade B by NAAC, Bangalore.
2. Department took active role in ISO certification Process for University.
3. Dr. Pore organized a one day workshop for “Jal-Jagruti Abhiyan” of GoM on 21/03/16. Officers from Water Resources Department, Superintending Engineer Mr. Kalokhe, Executive Engineer Mrs. Rajbhoj, Mr. Godse, Mr. Gavale delivered presentations on Water Management and Conservation.
4. Hon. District Collector, Raigad nominated Dr. Pore as member of District Level Committee in area of Water Conservation and Management.

## Dr. Sachin M. Pore

1. Working on various administrative committees of DBATU, namely. Academic Council, Building Works Committee, Anti-Ragging Committee and few other.
2. Worked as External Examiner for M.E. Dissertation Examination of Pune University students.
3. Musical Fountain was designed, executed and commissioned at Rajbhavan Nagpur by group of students from Civil Engg., Electrical Engg., ExTC Engg.
4. Working as Technical Consultant for many projects of state PWD and ZP. Nature of work involves structural design and structural auditing for buildings, bridges & water tanks.
5. Working as Technical Auditor for Jal-yukta Shivar Yojna, Raigad for District Collector Raigad
6. Completed Project of Design and Construction of Laboratory Complex of Rs. 2 Cr. for DBATU successfully & submitted all the necessary documents to University.

- Working as Structural Consultant for Development of Belgavi Airport at Sambra Belgavi for Airport Authority of India

### **Dr. Sariputta R. Bhagat**

- Member, Industry-Institute Interaction Cell (TEQIP-II).
- Member, Civil Works Committee (TEQIP-II).
- Member, University Committee, Rashtriya Ucchatar Shiksha Abhiyaan (RUSA), 2015.
- Member, Annual Report Committee of the University.
- Project Nodal Officer, Civil Works including Environment Management (TEQIP-II)
- Actively involved in material testing and quality control services through Concrete Laboratory,
- Geotechnical Laboratory and Environmental Engineering Laboratory.
- Member of Board of Studies in Civil Engineering
- Co-ordinator for BTP/BTS and PG

### **Faculty Research and Publications**

- P. R. Jagtap, S. M. Pore, Vipul Prakash (2015), "Necessity of Strengthening of Steel Structures with FRP Composites: a Review" International Journal of Latest Trends in Engineering and Technology, ISSN 2278-621X, Volume 5, Issue 4, July 2015, PP. 390-394.
- A. A. Darge, S. J. Mane (2015), "Treatment of Industrial Waste Water by Using Banana Peels and Fish Scales", International Journal of Science and Research, ISSN 2319-7064, Volume 4, Issue 7, July 2015.
- Prasad Sonar, P. R. Minde, S. R. Bhagat, S. S. Pusadkar (2016), "Improvement of Bearing Capacity by Skirted Foundation", International Journal of Emerging Technology and Applications in Engineering, Technology & Science, ISSN 2319-7064, Volume 9, Issue 1, PP. 603-608.
- Ambekar O. D., Jadhav H. S. (2016), "Bursting Stresses in Beam Column Joint Analysed and Designed as per Indian Standards", Int. Journal of Science and Research, ISSN 2319-7064, Volume 6, Issue 6.
- Thombre K.B., More A.B., and Bhagat S.R. (2016), "Effect of Replacement of Natural Sand by Grit on Workability of Concrete", 2nd National Conference on Innovations in Civil Engineering, January 08-09, 2016 organised by Government College of Engineering, Karad.
- Nikam Shubhangi, Bhagat S.R. (2016), "Dynamic Behavior of Underground Structures during Earthquake: A Critical Review", 2nd National Conference on Innovations in Civil Engineering, January 08-09, 2016 organised by Government College of Engineering, Karad.
- Prasad Sonar, S. R. Bhagat, S. M. Pore (2016), "Hydrological Measurement of Rainfall". National Conference on Technical Revolution (NCTR- 2016), March 10-11, 2016, jointly organized by Savitribai Phule Pune University& Akhil Bhartiya Maratha Shikshan Parishad's Anantrao Pawar College of Engineering & Research, Parvati, Pune.
- Ambekar O. D., Jadhav H. S. (2016), "Analysis and Design of Beam Column Joint", Proceeding of International Conference on Advances in Civil Infrastructure and Development of Smart Cities (ICACIDS-2016), February 27-28, 2016 organised by R.I.T. Sakharale.
- Patil M. S., Attar A. C. (2016), "Review on Soil Stabilization Techniques Using Industrial Wastes", Proceeding of International Conference on Advances in Civil Infrastructure and Development of Smart Cities (ICACIDS-2016), February 27-28, 2016 organised by R.I.T. Sakharale.
- Patil M. S., Attar A. C. (2016), "Experimental Feasibility Study of Foundry Sand Based Geopolymer as a Soil Stabilizer", Proceeding of National Conference for Engineering Post Graduate Students RIT NconPG-2016, May 20, 2016 organised by R.I.T. Sakharale.

### **8 . Industrial Visits for Students**





**Study of Ancient Stone Masonry at Khidrapur Temple Visit to construction site at Mangaon (Ferro-concreting)**

## 9. Student Involvements

### 9.1 Best Practices

- 1) We encourage students to search for industry sponsored projects for their final year project work, during their 3<sup>rd</sup> year of studies. This helps them to develop rapport in industrial resources. For this purpose our consultancy clients have helped us greatly.
- 2) Our contacts in PWD, Railways, Irrigation, ZP and similar Civil Engineering Departments in GoM and GoI have given ample access to our students for Industrial Training
- 3) Seeds of encouragement to take up competitive exams were sown in 1<sup>st</sup> batch so that 100 % students appeared in GATE and we have set a tradition to continue.

### 9.2 List of B. Tech. Projects during 2015-16

1. Portable Penetrometer
2. An Evaluation of Drinking Water Against the Drinking Water Standards and Remedial Measures
3. Comparative Study of Standard Gauge Over Broad Gauge with Indian Perspective
4. Assessment of Works under “Jalyukta Shivar Abhiyaan”
5. Utilization of University Canteen Waste for the Production of Biogas
6. Soil Stabilization
7. Red Mud Concrete
8. Manufacturing of Bricks Using Industrial Sludge
9. Applications of Ultrathin White Topping

### 9.3 CESA Team of Volunteers for the Academic Year 2015-16

S.N.	Name	Designation	Responsibility
1	Rushikesh Bhangadiya	President	Overall planning and conduct of student activities
2	Sampada Sondkar	Vice-president	Overall planning and conduct of student activities
3	Tushar Kate	Treasurer	Management of finance and accounts
4	Shubham Kothare	Technical coordinator	Planning of technical activities and execution
5	Sneha Sawant	Cultural coordinator	Planning of cultural activities
6	Akshay Gavhane	Sports coordinator	Planning and execution of sports activities
7	Gaurav Mahajan	Literature coordinator	Planning and execution of literary events

### 9.4 Prizes Secured in Various Competitions

#### 4<sup>th</sup> Year Civil Engineering

S.N.	Name	Event
1	Avinash Prajapati	1. Won 2 <sup>nd</sup> Prize in AVISHKAR 2015 Inter- University Research Convention. 2. Published Paper in NCTR- 2016 and in (NC-RDD-EMS-2016) 3. Won 2 <sup>nd</sup> Prize in Estate War and in Project Presentation Organized by GIT Khed 4. Event Management Head of University Technical Fest “CynoSure 2016” 5. Placed in MaxVal Company in Campus Interview
2	Tejas Bhamare	1. Published Research Paper in NCTR- 2016 2. Won 2 <sup>nd</sup> Prize in Project Presentation Organized by GIT College, Khed
3	Rushikesh Bhangdiya	Won Prize in 13 <sup>th</sup> National Youth Parliament Conducted by Ministry of Parliamentary Affairs

4	Tushar Kate	Won Prize in 13 <sup>th</sup> National Youth Parliament Conducted by Ministry of Parliamentary Affairs
5	Somnath Birajdar	Placed in MaxVal Company in Campus Interview
6	Balasaheb Mule	Won 2nd Prize in Estate War Organized by GIT College, Khed
7	Mangesh Tekade	Published Research Paper in NCTR- 2016 and in (NC-RDD-EMS-2016)

### **3<sup>rd</sup> Year Civil Engineering**

<b>S.N.</b>	<b>Name</b>	<b>Event</b>
1	Bhure Indrajeet S.	2 <sup>nd</sup> Prize in Town Planning "SHODH 2016" organized by GIT College Khed
2	Swami Venkatesh V.	2 <sup>nd</sup> Prize in Town Planning "SHODH 2016" organized by GIT College Khed
3	Ahire S.K.	2 <sup>nd</sup> Prize in Town Planning "SHODH 2016" organized by GIT College Khed
4	Lokhande Amol	1 <sup>st</sup> Prize in "Estate Wars" ("Cynosure 2016" organized by Dr. BATU, Lonere)
5	Lakhe Dinesh	1 <sup>st</sup> Prize in "Estate Wars" ("Cynosure 2016" organized by Dr. BATU, Lonere)
6	Patil Parag	1 <sup>st</sup> Prize in "Estate Wars" ("Cynosure 2016" organized by Dr. BATU, Lonere)
7	Khachane Devendra	1 <sup>st</sup> Prize in "Estate Wars" ("Cynosure 2016" organized by Dr. BATU, Lonere)
8	Shreyash Sinha	Won Prize in 13 <sup>th</sup> National Youth Parliament Conducted by Ministry of Parliamentary Affairs

### **1<sup>st</sup> Year Civil Engineering**

<b>S.N.</b>	<b>Name</b>	<b>Event</b>
1	Ujjawal Bagule	1 <sup>st</sup> Prize in "Estate Wars" ("Cynosure 2016" organized by Dr. BATU, Lonere)
2	Abhijit Belkade	1 <sup>st</sup> Prize in "Estate Wars" ("Cynosure 2016" organized by Dr. BATU, Lonere)
3	Ganesh B.	1 <sup>st</sup> Prize in "Estate Wars" ("Cynosure 2016" organized by Dr. BATU, Lonere)
4	Vijay Mali	1 <sup>st</sup> Prize in "Estate Wars" ("Cynosure 2016" organized by Dr. BATU, Lonere)

## **10. SWOT Analysis**

### **Major Strengths:**

1. Leadership & guidance from Hon. Vice-Chancellor, Academic Council and Executive Council.
2. Curriculum considering Basic needs of course and employability.
3. Assured source of grants from University Budget & Prospective resources such as AICTE, UGC, GoM, GoI.
4. Well-equipped and running labs for students.
5. Young and enthusiastic team of faculty.

### **Major Weaknesses:**

1. Shortage of competent faculty leads to overstressing of available manpower.
2. Inadequate furniture and civic amenities
3. Evaluation system is exam-centric leading to high number of examinations and leaving little time for faculty to find interest in project related activities.

### **Major Opportunities:**

1. Number of students of this department competes in the competitive examinations like GATE, TOEFL, and GRE.
2. Infrastructure development in country is moving with very fast rate. There is acute shortage of competent civil engineers in all the fields.

### **Major Challenges:**

1. Conducting departmental activities with the help of freshly graduated faculty members.
2. Producing engineers of required quality for the industry.

### **Future plans of the department:**

- To become a reputed seat of knowledge in Civil Engineering.
- To produce Civil Engineers required for Indian Industry.
- To promote institute – industry linkage for effective implementation of program objectives.
- To promote need based research in Civil Engineering.

★ ★ ★

# **Department of Computer Engineering**



**Arvind W. Kiwelekar**  
**Associate Professor and Head**

## **Message from Head of the Department**

I am glad to present the annual report of the Department of Computer Engineering for the year 2015-16. I would like to congratulate alumni, students and my colleagues for their professional achievements.

The year 2015-16 was a year of realization of our strengths. Our alumni are doing very well in all spheres of life, whether it is engineering, research, education, or social service. This was a year in which, a large number of students got recruited through on-campus and off-campus recruitment drives by the end of academic year 2015-16. This is especially noteworthy because during previous three years most of the students had to struggle for longer duration to get employment. This is also a year in which we witnessed a new trend: Final year students are being recruited by companies founded by our own alumni. Thus student-alumni network is evolving into a symbiotic ecosystem.

To conclude, I would like to categorically emphasize that it is our prime duty to help young students admitted in the department to realize their professional dreams through a disciplined and healthy learning environment.

**Arvind W. Kiwelekar**

## **About the Department**

The department of Computer Engineering was established in the year 1995, initially with B. Tech. program, having intake of 60 students. In the year 2001, two additional programs were introduced, M. Tech. program in Computer Engineering with an intake of 18 and B. Tech program in Information Technology with an intake 60 students. In the year 2004, the B. Tech. program in Information Technology was shifted to the newly created department of Information Technology. In year 2008, the first research scholar for Ph. D. program was enrolled in the department.

Graduates of the department are trained with three kinds of knowledge and skills so that they can apply the principles of Computer Science and Engineering to solve real-life problems from diverse application domains. First, the graduates are provided with the conceptual knowledge of the core topics of Computer Science. Second, they are also trained for knowledge of mathematical formalisms underlying various programming concepts. Third, graduates undergo rigorous practical training in which they acquire skills for the state of the art technologies and tools.

### **1. Vision**

The vision of the department is to be known as an educational institute which adopts learner-centered approach to education, aimed at deep understanding of computer science and engineering concepts as opposed to rote learning.

### **2. Mission**

The mission of the Department of Computer Engineering is to produce quality Computer Engineers, Researchers and Academicians capable of providing generic solutions to engineering problems with their knowledge of computer science concepts, mathematical abstractions and latest technologies.

### **3. Program Educational Objectives for B. Tech. (Computer Engineering)**

<b>Objective Identifier</b>	<b>Objectives</b>
<b>PEO1</b>	To provide knowledge of mathematical principles underlying programming concepts.
<b>PEO2</b>	To develop an ability to understand complex issues in the analysis, design,

	implementation and operation of information systems.
<b>PEO3</b>	To develop an ability to provide computer-based solutions to the problems from other disciplines of science and engineering.
<b>PEO4</b>	To impart skills necessary for adapting rapid changes taking place in the field of information and communication technologies.

#### 4. Functioning of the Department

##### Advisory Board

S.N.	Name	Organization
1	Dr. Rushikesh K Joshi	IIT, Bombay
2	Dr. Ameya Karkare	IIT Kanpur
3	Mr. Shridhar Bhat	Sarvha Systems Pvt. Ltd.
4	Dr. Sandeep Deshmukh	Data Torrent, Pune
5	Mr. Ashok Chundurwar	Reliance Jio., Mumbai
6	Mr. Santosh M. Bhilegaonkar	Bosch+Lomb, Pune Division

##### Board of Studies

1	Dr. Arvind W. Kiwelekar (Chairman)	Dr. B. A. Technological University.
2	Dr. J.A. Aghav (Expert)	College of Engineering, Pune.
3	Mr. Sameer Ganu (Industry Expert)	Persistent Systems Pvt. Ltd., Pune
4	Dr. Laxman D. Netak (Member)	Dr. B. A. Technological University
5	Mr. Yogesh N. Patil, (Member)	Institute of Petrochemical Engineering.

##### Research Committee

1	Dr. Arvind W. Kiwelekar (Chairman)	Dr. B. A. Technological University
2	Dr. Rushikesh K. Joshi (Expert)	IIT, Bombay
3	Dr. N. L. Sarda (Expert)	IIT, Bombay
4	Dr. A. V. Tendulkar (Expert)	Reliance Industries
5	Dr. J. A. Aghav (Expert)	College of Engg., Pune

##### Regular Faculty Members

1	Arvind W. Kiwelekar (Ph.D.)	Associate Professor and Head	Software Architecture, Artificial Intelligence
2	Laxaman D. Netak (Ph.D.)	Associate Professor	Computer Networks, Optical Networks
3	Manjushri Laddha (M.Tech.)	Assistant Prof. (Senior Scale)	Object-oriented Programming, Software Testing
4	Harishchandra Akarte (M.E.)	Assistant Prof. (Senior Scale)	Wireless Sensor Networks, Distributed Systems
5	I. R. A. Jhetam (M.Tech.)	Assistant Prof. (Senior Scale)	Databases, Software Engineering
6	Sanjay U Waikar (M.Tech.)	System Analyst	System Administration

##### Adhoc Faculty

S.N.	Name	Designation	Data Bases, Computer Networks
1	Mohan Patil (M.Tech.)	Assistant Professor	Software Engineering
2	Harsha Gaikawad (M.E.)	Assistant Professor	Computer Architecture
3	Phadtare Pankaj (M.E.)	Assistant Professor	Data Bases, Computer Networks

## **Supporting Staff**

1	S.M. Borse	Laboratory Assistant (Regular)
2	S.S. More	Laboratory Assistant (Regular)
3	Swati Tembe	Laboratory Assistant (Adhoc)
4	Abhijit Tembe	Laboratory Assistant (Adhoc)
5	S.S. Malgunkar	Peon (Regular)
6	Vivek Utekar	Peon (Adhoc)
7	Priyanka Jangam	Peon (Adhoc)

## **5. Program Specific Information**

S.N.	Name of the Program	Sanctioned Intake
1	Bachelor of Technology (Computer Engineering) B. Tech.	60
2	Master of Technology (Computer Engineering) M. Tech.	18
3	Doctor of Philosophy (Ph.D.)	5 on roll

### **Students Enrolled (Research Scholar)**

1	Hansraj Wankhede	Full time
2	Swanand Navandar	Full time
3	Rushali Dhumal	Part Time
4	Amol Bhutada	Part-time
5	Sanjay B. Thakare	Part-time

### **Students Enrolled (M. Tech.)**

1	First Year M. Tech. (Computer Engineering)	14
2	Second Year (Computer Engineering)	15

### **Students Enrolled (B. Tech.)**

1	First Year B. Tech. (Computer Engineering)	62
2	Second Year B. Tech. (Computer Engineering)	77
3	Third Year B. Tech. (Computer Engineering)	79
4	Final Year B. Tech. (Computer Engineering)	75

### **Category Wise Student Distribution**

	Total	General		OBC		SC		ST		VJ/NT		SBC	
		M	F	M	F	M	F	M	F	M	F	M	F
FY	62	11	6	15	9	5	4	1	3	4	3	1	0
SY	77	13	12	17	11	5	4	1	1	6	6	1	0
TY	79	17	14	18	11	7	4	3	0	3	2	0	0
Final	75	19	13	12	10	5	5	2	1	6	2	0	0
M.Tech.	14	1	3	2	1		6				1		

### **Faculty Achievements (2015-16)**

- Arvind W. Kiwelekar, Associate Professor, has presented a research paper on “Learning Objectives for Software Architecture”, in the 9<sup>th</sup> European conference of Software Architecture (ECSA 2015) held in Dubrovnik Croatia from 7<sup>th</sup> September to 11<sup>th</sup> September 2015.

- Laxamn D. Netak, Associate Professor, has successfully completed Ph.D.
- Harishchandra A. Akarte is selected for Ph.D. program under QIP in Motilal Nehru National Institute of Technology (MNNIT), Allahabad.
- I. R. A. Jhetam, Assistant Professor, has successfully completed M. Tech. Program.

#### **Participation in STTP/CEP by Faculty Members**

Name	Course	Duration	Venue
Arvind W. Kiwelekar	Outcome Based Education	One week 23 <sup>th</sup> June to 28 <sup>th</sup> June 16	DBATU, Lonere
Laxman D. Netak			
M. D. Laddha			
H. A. Akarte	MATLAB in Research and Data Analytics	One week 2 <sup>nd</sup> -7 <sup>th</sup> May, 2016.	S.G.G.S.I.T., Nanded
	Introduction to Design of Algorithm Organized	April 27 <sup>th</sup> to May 30 <sup>th</sup> 2015.	IIT, Kharagpur
Mohan Patil			
Pankaj Phadtare	Optimization	02 <sup>nd</sup> to 06 <sup>th</sup> November, 2015	IIT, Bombay
Harsha Gaikwad			

#### **Research Publications (2015-16)**

1. Vinod J. Kadam, M.D. Laddha, "Application of Biometrics for Authentication: Administrative Challenges", International Journal of Advanced Foundation and Research in Science & Engineering (IJAFRSE).
2. Volume 1, Special Issue, Vivruti 2015. Impact Factor: 1.036, Science Central Value: 26.54 Vinod J. Kadam, Shraddhanand V. Upadhye, M.D. Laddha, "Implementation of University Sports Time table Scheduling using Genetic Algorithm-A Case Study ", International Journal of Advanced Foundation And Research In Science & Engineering (IJAFRSE) Volume 1, Special Issue , Vivruti 2015. Impact Factor: 1.036, Science Central Value: 26.54
3. Arvind W. Kiwelekar, Hansraj Wankhede, "Learning Objectives for Software Architecture", in the 9<sup>th</sup> European conference of Software Architecture (ECSA 2015) held in Dubrovnik Croatia from 7<sup>th</sup> to 11<sup>th</sup> September 2015.
4. Gaurav A. Paliwal, Arvind W. Kiwelekar, published a Book chapter on "A Product Line Architecture for Mobile Patient Monitoring System" titled Mobile Health, 2015 Publisher Springer.
5. Arvind W. Kiwelekar, Hansraj Wankhede, published a paper, "Qualitative Assessment of Software Engineering Examinations with Bloom's Taxonomy" in Indian Journal of Science and Technology Vol 9 Issue 6 Date 3/3/2016.
6. Arvind W. Kiwelekar, Hansraj Wankhede, Sanil Gandhi published a paper, "On Which skills do Indian Universities evaluate Software Engineering Students". In CoRR Repository.
7. Hansraj S. Wankhede has presented his doctoral problem on "Techniques and Methods for E-learning" in the Fourth International Conference on Learning and Teaching in Computing and Engineering Mumbai, India, March 31st - April 3rd, 2016.
8. Swanand Navandar has presented his doctoral problem on "Cognitive Modeling of Software Language Learners" in the Fourth International Conference on Learning and Teaching in Computing and Engineering Mumbai, India, March 31st - April 3rd, 2016.

#### **Alumni Corner**

	<p><b>Ashish Tendulkar</b> graduated with B. Tech. from the department in year 1999. After completing B. Tech, he joined for M. Tech. and Ph.D. at IIT Bombay. He has also received post-doctoral fellowship. He served as a faculty member in IIT Madras and TIFR. Now he is working with Google India, Hyderabad.</p>		<p><b>Pravin Pawar</b>, graduated with B. Tech. from the department in year 2000. After completing his Ph. D., he joined for M. Tech. under Early Faculty Induction Program (EFIP) in IIT Bombay. He earned his Ph. D. from University of Twente Netherlands and Post Doctoral fellowship from the same University. He served as faculty member in NIT, Goa. Currently he is working in Phillips Research India, Bangalore</p>
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	<p><b>Neeraj Parolia</b> graduated with B. Tech. in year 1999. He received his Ph.D. in business administration from the University of Central Florida. His major area is MIS. He additionally holds a M.S. in computer science from Western Michigan University. He has also served as a faculty member in S.J. Mehata School of Management in IIT Bombay. Currently he is working as an Associate Professor in Towson University USA.</p>		<p><b>Vijay Bhuse</b> graduated with B. Tech. in year 1999. He is a networking and a Cyber security expert. He has supervised and led over 200 students to achieve industry standard certifications (CompTIA Security+, Network+, CCNA). His publications have received more than 350 citations. In 2007 he was awarded a Fellowship at the Institute of Security Technology Studies at the Dartmouth College. In 2011 he received 'Teacher of the year' award at the ECPI University, where he worked before coming to the East Tennessee State University</p>
	Pinkii Roy is graduated with B. Tech. (2001) and M. Tech. (2003) from the department. She received Ph.D. from IIT Guwahati and presently working as Assistant Professor at National Institute of Technology, Silchar. She received Rashtriya Gaurav award from New Delhi in year 2015.		

### Students' Achievements

#### Success in Competitive Examinations

S.N.	Name	Examination	S.N.	Name	Examination
1	Supe Piyush Gopal	GRE	7	Vaibhav Parve	GRE
2	Kavade Akshay Mukund	GRE	8	Utkarsh Patil	GRE
3	Jayendra Khandare	GRE	9	Utkarsh Patil	GATE
4	Gunratna Lonare	GRE	10	Swati Waghmare	GATE
5	Shashim Waghmare	GRE	11	Vivek Patil	GRE
6	Rushikesh Pawar	GRE	12	Prasad Chaugule	Ph.D.IIT Bombay

#### Placement as on 30<sup>th</sup> June 2016

S.N.	Name	Organisation	S.N.	Name	Organisation
1	Abhijeet Katte	PSPL	15	Harshada Garse	L&T
2	Ruturaj Molawade	PSPL	16	Yash Patil	L&T
3	Utkarsh Patil	PSPL	17	Hemangi Patil	Siemens Software
4	Trupti Dhumal	PSPL	18	Abhishek Jaryal	CMS
5	Rajesh Sawant	PSPL	19	Shubham Baraskar	CMS
6	Trupti Dhumal	PSPL	20	Mukul Dhabale	MediTab
7	Krishna Zore	Drona Aviation	21	Anmol Verma	TCS
8	Priyanka Ghanvat	Paladion Networks	22	Pratik Mhatre	SwamiSolutions Pvt. Ltd.
9	Chaitanya Jadhav	Paladion Networks	23	Chaitali Rupanvar	Techsignia
10	Gaurav Farakate	Paladion Networks	24	Hanumant Shinde	GS Labs
11	Manisha Lengde	Paladion Networks	25	Sumit Tembe	GS Labs
12	Piyush Supe	Paladion Networks	26	Manisha Yadav	PSPL
13	Rajhans Jadhao	RedCarpetUp, Gurgaon	27	Ichharam Sonawane	PSPL
14	Gaurav Dhiman	L&T			

#### M. Tech. Fellowships

1	Vijaya Paymal	TEQIP Rs. 8,000/- PM	6	Surekha Gite	TEQIP Rs. 8,000/- PM
2	Swapanja Bhoir	TEQIP Rs. 8,000/- PM	7	Akanksha Magre	TEQIP Rs. 8,000/- PM
3	Sonali Kotkar	TEQIP Rs. 8,000/- PM	8	Ranjit Patil	Posco fellowship 30,000/-
4	Priyanka Satve	TEQIP Rs. 8,000/- PM	9	Ashu Mehta	Posco fellowship 30,000/-
5	Avinash Nirbhavane	TEQIP Rs. 8,000/- PM	10	Ruturaj Molawade	Posco fellowship 30,000/-

### **Alumni working as Faculty members in Premier Institutes from Maharashtra**

1	Dr. Sunil B. Mane	CoE, Pune	5	Mr. Balaji Shetty	SGGSIT, Nanded
2	Mr. Siddharth Gaikwad	CoE, Pune	6	Mr. S.G. Shikalpure	GEC, Aurangabad
3	Mr. Danie J. Pareria	GEC, Avsari	7	Bhushan Yelure	GEC, Karad
4	Mr. Harsih Gadade	GEC, Jalgaon			

### **Infrastructure Upgradation**

- Three LCD projectors are purchased costing approx Rs. 90,000/- for lecture and seminar presentations.
- Electrification of new laboratories was undertaken costing approximately 16.00 lakhs rupees.

### **M. Tech. Projects**

Name of the Student	Project	Guide
Vijaykaran S. Gaikwad	Natural Language Interface to Database NLIDB	Prof. M.D. Laddha
Sonali D. Kotkar	An Approach for Cost Effective Privacy Preservation in Cloud	Prof. Y.N. Patil
Ranjit M. Patil	The Three Tier Security Scheme in Wireless Sensor with Mobile Sinks	Prof. H.A. Akarte
Rupesh R. Patil	Secure and Reliable Routing Protocol for Payment Transfer in Heterogeneous Multihop Wireless Network	Prof. H.A. Akarte
Ichcharam S. Sonawane	An Algorithm to find dominance strategy in a two player game.	Prof. A.W. Kiwelekar
Avinash G. Nirbhawane	Decentralized Access Control and Anonymous Authentication of Data Stored in Cloud	Prof. Y.N. Patil
Swapnaja H. Bhoir	Traffic Pattern Based Streaming Content Leakage Detection for Secure Packet Transfer	Prof. H.A. Akarte
Surekha B. Gite	Automatic Generation of Gap-fill question and Wh-type question	Prof. M.D. Laddha
Vinod Kadam	Time Table Scheduling using Genetic Algorithms	Prof. A.W. Kiwelekar
Shrikant G. Kale	Effective Pattern Discovery for Text Mining	Prof. Y.N. Patil
Aakanksha Magare	Automated GUI Testing for Android Application	Prof. M.D. Laddha
Ashu Mehta	Duplicate Detection in Hierarchical XML Data	Prof. Y.N. Patil
Sitaram B. More	Secured data Deduplication	Prof. Y.N. Patil
Vijaya S. Paymal	Distributed, Concurrent and Independent Access to Encrypted Cloud Database	Prof. Y.N. Patil
Priyanka P. Satve	Independent Access to Encrypted Cloud Database	Prof. H.A. Akarte

### **B.Tech. Projects:**

S.N.	Name of Student	Project Title
1.	Manisha Yadav, Swati Shankar Waghmare	Skill Arena (Web Application)
2.	Katte Abhijeet Ganpat	Talk 2 GUV(Natural Language Querying of Public Data sets)
3.	Sharma Nilesh Manojkumar	A Hybrid Cloud Approach for Authorized Secured Reduplication
4.	Verma Anmol Brahmanand Pandey Prachi Ashok Patil Yash Arun	Hostel Management
5.	Jadhao Rajhans Babulal Zore Krishna Bhagwan Kavade Akshay Mukund	App vigil Android Studio
6.	Patil Hemangi Shivajirao Ambekar Nivedita Nandkumar Rajput Mrunal Jagan	Traffic Rules Controlling App
7.	Thakur Amansingh Tarasingh Nandeshwar Dipak Timraj	Learner

8.	Pardeshi Shubham Prabhakar Patil Amol Sharad Sawant Rajesh Ramchandra	Twitter Sentiment Analysis
9.	Dhotre Ajay Chandrakant Dhabale Mukul Dhawale Chandramuni Vasantrao	Transparency in Budget Maintenance
10.	Nipanikar Rakesh Solage Purushottam Pawara Savita	Ensuring Distributed Accountability in Cloud
11.	Palangtode Pooja Govindrao Ballal Apeksha Shirang	Project Scheduling Management Based on PERT and BN
12.	Singh Priya Padamsingh Gosavi Sushmita Dhanraj Dhakane Mahesh Ambadas	Book Finder
13.	Jadhav Chaitanya Vijay Ghanvat Priyanka Bajrang	University Intranet Portal (Web App)
14.	Khatate Depesh Dilip Mhatre Pratik Dattatray	C&R Android Application
15.	Supe Piyush Gopal Magar Rohit Ravindra Kondekar Vyankatesh Vijaykumar	Multi Visual Sharing Using SDN Paradigm
16.	Gaurav Dhiman, Abhishek Jaryal	Bluetooth Messenger Application
17.	Patil Utkarsh Manik, Molawade R.T.	Remote Network Monitoring Client for Android
18.	Bhosale Priyanka Mahadeo Kekane Suchita Subhash Dalvi Ravina Arvind	Metamodel Conversion
19.	Gangrekar Heena A. Sattar Gorivale Amruta Ashok Salvi Bhumika Yashavant	Automated Conversion of 2D image into 3D image
20.	Karpe Sanket Sudhakar Dhumal Trupti Ulhas Kolge Tejas Bhagwan	Roll Shop Resource Planning System
21.	Kale Ankita Anil, Kolte Snehal Anil	Autobot/Auto Answering Machine Using Hadoop
22.	Rane Sonal Sundar Potinda Mandar Chandrakant Solanke Balasaheb Marotirao	Super Resolution Based Inpainting
23.	Baraskar Shubham Anil Farakate Gaurav Anandrao Dhage Sameer Anil	Alumni Search Engine
24.	Bhandkoli Priyanka Laxman Jadhav Tushar Anand Zambare Jayesh Rajendra	Social Net Site for Social Responsibility
25.	Sonvane Piyush Hansaraj Firke Rupali Pramod Rupanavar Chaitali Bapurao	Detection Mitigation Imagination of DDOS Attack
26.	Gajmal Shital Dattatraya Hase Snehal Bharat Lengde Manisha Rajan	Notification Management System Application Using Android Studio
27.	Shinde Hanumant, Bandewar Nagesh	Data Leakage Detection
28.	Nagothkar Namita Ulhas Patil Surbhi Kiran Sawant Priyanka Uttamrao	Mobile Calling Using Wi-Fi

### 6<sup>th</sup> Sense Robotics Workshop



★ ★ ★

## Department of Electrical Engineering



**Dr. K. Vadirajacharya**  
Associate Professor & Head

#### From the HoD's Desk

It gives me great pleasure to present annual report of Electrical Engineering department of the academic year 2015-16. The progress of the department has multifold.

Our faculty is making progress towards providing a conducive 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 have embarked upon a significant governance reform initiative to adopt good governance practices.

This gives me immense pleasure to share certification from apex bodies like NBA, NAAC and ISO as measure of our continuous efforts for quality improvement.

On behalf of all faculty, staff and students, I extend our sincere thanks to our stakeholders for their continued support and invaluable contribution. 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. K. Vadirajacharya, M.E. Ph.D. (IIT Roorkee)**

#### Vision

To be a leader in transfer of Energy and Electrical technology through education, innovation of international acceptance at national industries and local society at affordable cost.

#### Mission

1. To cater the needs of modern Electrical Engineering Graduates to excel in the challenges of modern society through sound knowledge of fundamentals and applications.
2. To work intensely with industry in pursuit of the above goals of education and research, leading to the development of cutting edge and commercially-viable technologies.
3. To train teachers capable of inspiring the next generation of engineers, scientists and researchers.

#### 1. Overview of Department

- The Department of Electrical engineering was established in 1993 with an aim to become leader in energy and Electrical Engineering technology through imparting high quality education to fulfill the needs of national

industries in particular and local society in general through cutting edge and commercially viable technologies.

- The department has one UG program in Electrical Engineering with an intake of 60 students, one P.G. program in Electrical Power System with an intake of 18 students. It registers for research programs leading to Ph.D. in emerging areas of Electrical Engineering both full time and part time.
- The department has well established laboratories in Electrical Power Systems, Power Electronics, Energy Systems, Electrical Machines, Control Systems, Electrical Measurements and Instrumentation with modern equipment.
- The department encourages extracurricular activities like technical workshop/seminar/NCC/NSS social get-togethers and sports activities to foster the overall development of our graduates.
- We firmly believe that Engineering is the professional and systematic application of science to the efficient utilization of natural resources to produce wealth.
- Since last two decades our alumni have marked distinct impression all over the globe through their knowledge, hard work and leadership qualities.
- We could able to achieve this appreciation through our dedicated team of faculty and staff, well-structured curriculum, rigorous training modules to all, and continuous advice and inspirations from different advisory committee time to time.

### **3. Academic Structure:**

#### **3.1 UG/PG/Ph.D. Courses**

**A. Undergraduate Course:** B. Tech. Course in Electrical Engineering

**B. Post-graduate Course:** M.Tech. in Power System Engineering

**C. Ph.D.:** Research Areas - Energy Systems, Power Quality, Smart Grid, Power System Protection.

### **4. Statistics**

Level	Program	Intake	Year	Accreditation Status (A/NA)	Earlier Accreditation Status	Year of obtaining Accreditation
UG	B. Tech.	60	1995	A	A	2006
PG	M. Tech.	18	2008	NA	NA	NA
Ph. D.	Ph. D.	--	2008	NA	NA	NA

#### **4.1 Students Information**

No. of students	Level	Program	2014-15	2013-14	2012-13	2011-12
Boys	UG	B. Tech. in Electrical Engg.	202	208	213	216
Girls	UG	B. Tech. in Electrical Engg.	82	79	85	78
Total	UG	B. Tech. in Electrical Engg.	284	287	298	294

#### **4.1.1 Ph.D. Scholars**

##### **Research Scholars**

Name	Registration No.	Registration Date	Work Experience
Mithun G. Aush	RS20120201	25/09/2012	3 years
Manoj Dhondiram Patil	RS20130201	12/08/2013	3 years
Vijaykumar Annaji Kulkarni	RS20080201	01.01.2008	
Vilas Shamrao Bugade	RS20120202	25/09/2012	
Kamble Sachin Gorakh	RS20140201		
Mahadik Yogesh Vilas	RS20140202		

#### **4.2 Faculty Information: Permanent Faculty**

##### **Dr. Katti Pradip Krishna**

**Experience: (Teaching/ industrial) 30 Years**

**Research guidance: PG Completed = 14, Ongoing = 04. Ph.D.: Ongoing = 03**

##### **1. Publications**

	National	International
Conference	65	70
Journals	02	21

##### **2. Professional body membership:**

1) LMISTE : Indian Society for Technical Education

2) MIE : Institution of Engineers India

### **3. Awards:**

“Bharat Jyoti Award” by “India International Friendship Society”- New Delhi. For Outstanding achievements in the field, in October 2003

#### **As an expert and research person:**

- Delivered keynote address and session speeches at different STTP, conferences and training programs.
- Chaired for sessions at International and National Conferences in India and abroad. Reviewer for international journal on Energy Elsevier.
- Organized Faculty development programs, Training programs for Teachers and students, Conferences and workshops.

#### **Dr. Vadirajacharya K.**

##### **1. Experience: (Teaching/ industrial)**

- G.U.I. Trainee BEML KGF, Karnataka
- Lecturer, COE, Pravaranagar (1986-1993)
- Asst. professor, Dr. B.A.T.U., Lonere(1993-2007)
- Associate Professor, Dr. B.A.T.U., Lonere (2007-till date)



##### **2. Project / Thesis work:**

###### **B.E: Survey on Energy Consumption Pattern in Industrial Locality.**

1. M.E.: Economic Load Dispatch using FLN
2. Ph.D.: Performance Investigation of UPQC

##### **3. Research & Publications**

	<b>National</b>	<b>International</b>
Conference	20	35
Journals	-	17

Guided 14 M.Tech dissertation and more than 60 B.Tech Projects and guiding 7 Ph.D. Research scholars and 5 M.Tech dissertations.

##### **4. Membership of Professional Bodies**

- 1) Life Member ISTE
- 2) Advisory Board Member Bioinfo Publication.
- 3) Life member ISRD.
- 4) Fellow, CET-India (Council of Engineers and Technologists)
- 5) Member, DAC (Dept Advisory Board) Modern College of Engineering Pune.

##### **5. Professional Quality Upgradation**

<b>STTP Attended</b>	29
<b>STTP Organized</b>	13

##### **6. Professional Extension Services**

As evaluator of M.Tech. Thesis	16 [PU-20, MU-4]
As resource person at STTP	15
As Consultant	04
As Session Chair	04

Basic and specialized laboratory development in Electrical Engg. Planning and execution of three 100 kVA substations, H.T. and L.T. line erection, Wiring of hostel buildings, officers quarters and bungalows, Street lighting in campus. Curriculum development, NSS Programme Officer and Departmental administration. GATE guidance coordination of department and University, Coordination of Training activity of University faculty and staff (Planning, approval and execution), Student counseling, coordinating placement and soft skills development of students.

##### **7. Awards**

Best student (Merit Award), Best Teacher (CoE, Pravaranagar)



#### **Mohamad Faruk Satarkar**

##### **1. Experience: (Teaching/ industrial)**

12 years teaching experience

## **2. Publications**

	National	International
Conference	2	11
Journals	-	6

## **3. Workshop / Training Attended**

Attended sixteen workshops.

### **Dr. Patil Udaykumar Vasudeo**

#### **Experience: (Teaching/ Industrial)**

3 years (Executive Quality Assurance-Test Lab) MSD Switch-gear LTD, Jalgaon.  
16 years as a Lecturer in Dr. B.A.T.U., Lonere.

#### **1. Project / Thesis Work:**

#### **B.E : Microprocessor Based Tachometer For Submersible Pump**

#### **2. Publications**

	National	International
Conference	6	8
Journals	-	3

#### **3. Research Work:**

P G: Completed = 5, Ongoing = 04.      Ph. D.: Ongoing = 03

#### **4. Reviewer:**

International journals like IEEE, IET, Taylor & Francis, and IEEE conferences

#### **5. Membership of Professional Institutes:**

1. Member IEEE.
2. Life Member of Indian Society of Technical Education

### **Madhavi Rajendra Harischandra**



#### **1. Experience: (Teaching/ industrial)**

- 8 years experience as Asst. Professor in Electrical department at K. G. C. E., Karjat
- 5 years experience as Asst. Professor in Electrical department at Y. T. I. E. T., Karjat
- 1 year experience as Asst. Professor in Electrical department at A. I. K. T. C., Panvel
- Working as Asst. Professor Electrical department at Dr. B. A. T. U., Lonere
- Conducted special classes for students preparing for GATE.

#### **2. Project / Thesis work:**

Design of Robust Controller for Non-linear Control System using Generalised Describing Function.

#### **3. Workshop / Training Attended:**

Total 14 weeks of short term training programs.

### **Faculty on Contract**

**Name:** Prashant Kishanrao Jadhav

#### **1. Experience: (Teaching/ industrial)**

- \* Performed 6 Months of Internship on Supply Power Quality Improvement using Steinmetz Principle and Network Short Circuit Capacity in Shreem Electric Ltd., Jaysingpur
- \* Participated in one day Workshop on Overview of Variable Frequency Electrical Drives, Refrigeration and Air-Conditioning Conducted by Danfoss India at VIT University, Vellore
- \* In Plant Training at 220 kV Substation, Harangul, MSETCL
- \* In Plant Training at MSECL Testing Division, Kalyan

#### **2. Projects**

- \* Supply Power Quality Improvement using Steinmetz Principle and Network Short Circuit Capacity.
- \* Implementation of Space Vector PWM for Five Level Diode Clamped Inverter.
- \* The Energy Management of Hybrid PV System.

\* Application of Optimization Technique for Maximum Power Point tracking using Boost Converter.

### 3. Awards:

Appreciation for the role as ‘program representative’ for the M.Tech. Power Electronics and drives division in VIT University

### 4.3 Supporting Staff

#### Hemant Ramesh Washikar

##### 1. Experience: (Teaching/ industrial)

11 years industrial experience in commissioning & erection of plant



##### 2. Project / Thesis work:

Diploma : Industrial Power Capacitors



#### Mr. Chetan Arjun Juikar

##### 1. Experience: (Teaching/ Industrial)

6 years experience

##### 2. Workshop / Training Attended:

- 1) Enhancing Skills for Laboratory Development
- 2) Technical Education Quality Improvement Program



#### Mrs. P.S. Padwal

##### Experience: (Teaching/ industrial)

- 1) 5 years in building construction.
- 2) 2 years as Lab-assistant in BATU



#### Mr. Tukaram Gangaram Hambir

Laboratory Attendant

### 5. Facilities:

#### 5.1 Laboratories in Electrical Engineering Department

The department has well equipped laboratories for Undergraduate program in the areas of Electrical Machine, Power System & Switchgear, Power Electronics, Measurements & Instrumentation, Advanced Computations, and Control System & Microprocessor with advanced measuring facilities. These laboratories have been identified under seven major divisions.

1. Basic Electrical Engineering Laboratory
2. Power Engineering Laboratory
3. Power Electronics Laboratory
4. Microprocessor and Control Laboratory
5. Measurement and Instrumentation Laboratory
6. Electrical Machines Laboratory
7. High Voltage Engineering Laboratory

Few set-ups have also been developed and fabricated by the final year students under their final year project work. Recently, advanced equipment have been procured to strengthen laboratory under TEQIP II-World Bank Project wherein development of Renewable Energy laboratory is a special feature. The Wi-Fi services have been provided throughout the department with a secured access for the benefit of the students of the department.

#### Laboratory: Network Lab

Lab in Charge: Dr. K. Vadirajacharya

Lab Assistant: Mr. Washikar

S.N.	Equipment	Quantity	Cost
1	Bridge type Potentiometer	2	10938

2	Wheatstone Bridge with Galvanometer	2	14328
3	Galvanometer with Ballastic	1	5277
4	Power Factor Meter 3 phase	1	19492
5	Megger 1000v, 100 Mohm	1	9605
6	Galvanometer with Ballastic	1	5017
7	MTDC Voltmeter	70	92175
8	MTDC Ammeter	70	209008
9	MICA Voltmeter	70	64502
10	MICA Ammeter	55	69801
11	1 Phase Wattmeter TDDC Type	20	33798
12	Low Power Factor Wattmeter	10	37110
13	1 Phase Wattmeter TPDC Type	25	44540
14	Type SY 144M Square Switch Board Flash	03	46578

#### Laboratory: Renewable Energy Lab

Lab in Charge: Dr. P. K. Katti

Lab Assistant: Mr. Washikar

S.N.	Equipment	Quantity	Cost
1	PV system	1	185000
2	Solar emulator	1	450000
3	PV trainer and PV grid tied training system	1	450000
4	Wind turbine emulator	1	900000

#### Laboratory: Switchgear and Protection Lab/Power System Lab

Lab in Charge: Prof. M. F. A. R. Satarkar

Lab Assistant: Mr. C. S. Juikar

S.N.	Equipment	Quantity	Cost
1	Simulation model for MERZ-PRICE, protection for alternator unit, Distance protection model for T.L.	6	314751
2	Current Transformer Potential Transformer	6 9	21410
3	Simulation Models Transmission lines CT testing kit PT testing kit Switchgear/Protection relay testing kit	3 1 1 1	163210
		TOTAL	499371

#### Laboratory: Computer Lab

Lab in Charge: Dr. U. V. Patil

Lab Assistant: Mr. H. Washikar

S.N.	Equipment	Quantity	Cost
1	HP Computer system	5	40800
2	HCL Info System Ltd	8	17000
3	DELL Vastro 1400 Laptop	4	46280
4	HCL Info System Ltd 43cm LCD	8	8600
5	HP DX 780-Exo 29 AV INTEL 2.8 GHz 3MB 2GB 320GB	15	41396
6	Lenovo M732 Desktop PC	20	41396

#### Laboratory: Control System Lab

Lab in Charge: Dr. U.V. Patil

Lab Assistant: Mr. C. A. Juikar

S.N.	Equipment	Quantity	Cost
1	PID Controller	1	10750
2	Compensation Design	2	18300
3	Compensation Design	2	18300
4	Linear System Simulator	2	16700
5	Digital Control System	2	29500
6	DC Position Control and Manual	2	19900
7	Potentiometric Error Detector	2	5850
8	Control System Kit	16	56936

9	Synchro-Transmitter-Receiver Pair	2	26860
		<b>Total</b>	<b>203096</b>

### 5.3 EESA

EESA is one of the most active student associations, which not only concentrates on technical activities but also helps to improve the students' participation in co-curricular as well as extracurricular activities. Thus, it helps the students in developing various facets of their personalities to blossom as complete individuals.

## 6.0 Academic Structure:-

The department functions through a departmental committee consisting of all faculty members of department. Representative of students, one at UG and one at PG level is included in functioning of department within the general rules and regulations of the University. A representative is also sought from the non-teaching staff of the department and included in committee. This committee meets at least once in month and more frequently if required, as per the needs of the department. The departmental committee has collective responsibility of managing and enhancing the overall performance of department.

The following is the list of various committees under departmental committee and respective faculty members:

### 6.1 Academic Monitoring Committee-

Committee Members- Prof. M.F.A.R. Satarkar (Chairman), Mr. Prashant Jadhav, C.R. of each class, supporting staff-2.

This committee is for ensuring the development of curriculum, attendance of students, time table of academic activities, laboratory courses, additional academic training to weak students, identifying new teaching-learning methodologies, training of faculty in pedagogy & industry evolving new methodologies, interaction with other institutes for learning and adopting best practices, industrial training and refresher courses.

This committee also interacts with alumni, maintaining database of alumni, organizing alumni meet, raising fund from alumni for departmental developments, seeking placements & training of students, staff & faculty, developing relationship with industries, organizing lectures.

### 6.2 Research & Development Committee

Committee Members- Prof. U.V. Patil, SRF/JRF, M.Tech year student-1

This committee deals with R&D activities, projects, interaction with other institutes for research projects of PG & Ph.D. students, undergraduate students, preparation of proposals from state and central government agencies for departmental development like RUSA, DST-FIST, AICTE, minor and major projects of UGC. It also collects topics from faculty members, selection & allotments of topics, collection of seminar reports, anti-plagiarism test on submissions, conduct of seminar & projects, collection of marks and evaluated reports, moderation of marks and submission of marks list.

### 6.3 Purchase Committee

Committee members- Prof. P.K. Katti, Mr. Umesh M. Barhate, Mr. H.W. Washikar, Mr. H. Hambhir

This committee is assigned to meet the regulatory compliance, data filing, and timely submission of data for departmental courses. It is also assigned for purchase of equipment for common usage, consumable and contingency of department, developing infrastructure of department.

### 6.4 Industry Institute Interaction Co-ordination Committee-

Committee Members- Prof. K. Vadirajacharya, Mr. C.A. Juikar

Communication & interaction with industries for training and placement, allotment of students for training as per merit, follow up during training, visit to industry, discussion with industrial person, identifying limitation of students in particular area, submission of reports, presentation by students, and record of industrial training. Also to provide soft skills training to students, organizing mock GD, aptitude test and interview for students and to conduct guest lectures.

### 6.5 Extracurricular Activity Committee

Committee Members- Prof. R.H. Madhavi, Smt. S.P. Padwal, CR of each class

This committee is for timely publication of work carried out by the department, including Annual reports, course contents, e-content, generation of faculty lectures for online availability, and website updates. It works for identification of needs of the students & staff in the department, developing measures to meet the demands and raising the means from external resources such as scholarships from charity organizations.

### **6.6 Board of Studies (BoS)**

S.N.	Name	Designation	Position
1	Dr. P.K. Katti	Head, Dept of Electrical Engineering, Dr. BATU, Lonere	Chairman
2	Dr. N.S. Lingayat	Head, Dept of Electrical Engineering, IoPE, Lonere	Member
3	Shri. S.L. Sonawane	MERC, Mumbai	Expert
4	Dr. K. Vadirajacharya	Dept of Electrical Engineering, Dr. BATU, Lonere	Co-opted Member

The main function of the BoS is to define a course curriculum and the contents of individual courses, to decide on the electives to be offered. Some of the members of the BoS are experts from industries which give inputs regarding the topics that are relevant from industry point of view and to recommend books including text books, reference books, and journals of academic and industrial interests for the courses of studies. It recommends to the Academic Council for being forwarded to the Executive Council for its approval, the preparation and publication of selections of anthologies of the writings or works of authors and other masters in any subject or group of subjects and the names of the authors in its opinion.

### **7.0 Activities:**

#### **7.1 Industrial Visits 2015-16:**

S.N.	Industry Details & Address	Date	Class & Students	Coordinators
1	Royal Engineering, Ahmedabad	8-11/03/2015	B.Tech – II 58 Students	Ms. Monali Bhise Mr. N.K. Patil
2	Ajinkyatara Sahakari Sakhar Karkhana, Satara	20/04/2015	B.Tech – I 58 Students	Mr. N. Patil Ms. Harshal Gosavi
3	CPRI, Bangalore	12-15/02/2016	All Year 42 Students	Dr. U.V. Patil

#### **ELECRAMA 2016 Visit**

The students of Electrical Engineering Department visited ELECRAMA 2016, held at ‘Bengaluru International Exhibition Centre’ in Bangalore. The total of 47 students and one faculty visited Bangalore from 13<sup>th</sup> Feb to 16<sup>th</sup> Feb which also included a visit to CPRI (Central Power Research Institute), Bangalore on 15<sup>th</sup> February. ELECRAMA was a five days event being held from 13<sup>th</sup> February to 17<sup>th</sup> February 2016 in Bangalore, India. It was a biggest showcase of the world of electricity, featuring not just equipment & technology but also leadership platforms for everything from technical conferences to industry summits.



It had a preview of new & upcoming products and technology with a wide spectrum of display- over 221 various transformers, 321 cables & conductors, 202 control & switchgear equipment, 113 Instruments & Instrumentation amongst others. The event focused on knowledge sharing & career advancement opportunities through seminars, symposia & conferences for students. The new emerging technologies and solutions to some common industrial problems was the main highlight of the event. The display of numerous innovative projects by various educational institutes was very useful to the students and motivated them. The project ideas included solar vehicle, energy efficient smart fan, and wireless transfer of power efficiently, universal transformer, etc.

CPRI, Bangalore being a central body is associated with several national as well as international organizations to test and certify their products. CPRI arranged the visit to various sections including power capacitors, transformer testing, cables and conductors, energy meter calibration, high voltage and power system lab. Starting with energy meter lab, the testing and calibration of energy meters was demonstrated. The error measurement and method of identifying a faulty instrument was seen. The information about testing of cables under various environmental effects and also faults on system such as over voltages, over currents, switching surges, impulse and transients was given. The actual testing of surge arrestor in high voltage lab was shown to the students. The setup for testing under different environmental conditions using rain simulation, temperature rise was also seen. The process of identifying faulty equipment by various tests was shown. The interaction of students with the industry experts was very productive, which also led to some innovative project ideas for the students. The students were informed regarding several training and intern programs arranged by CPRI and encouraged to actively participate in same.

The overall visit was very useful to the students in understanding the concepts and relating their theoretical knowledge with the industrial applications. It also led to some project ideas which were based on industrial applications.

### **Department Contribution to NCC/NSS 2015-16**

National Cadet Corps is a tri-services organization, compromising the Army, Navy and Air Force, engaged in grooming the youth of the country into disciplined and patriotic citizens. The cadets are given basic military training in small arms and parades. The officers and cadets have no liability for active military services once they complete their course but are given preference over normal candidates.

Our department produced dynamic cadets to our NCC UNIT who got highest rank with participation in reputed camps with good result.

#### **'B' Certificate Completed Cadets-**

Cadet Arif Sayyad (T.Y. B. Tech.) Grade 'B'.

Cadet Ganesh Chaudhari (T.Y. B. Tech.) Grade 'B'.

Cadet Swapnil Powar (T.Y. B. Tech.) Grade 'B'.

They actively participated in various activities organized in University such as Blood donation, Tree Plantation, Shiv Jayanti, Trekking, Women Empowerment, Help to Labors, Polio Eradication Mission, Medical assistance to Mangrul village and many more.



### **7.2 Training Program Organized:**

#### **For supporting staff:**

01	Life Skills for Happy Life	TEQIP	WCES	23-25 April 2015
02	Field Visit	TEQIP	SRTMN & SGGSN	28-09 to 01-10 2015
03	Safety Measures in Laboratories	TEQIP	DBATUL	25-29 Feb 2016

### **7.3 GATE Qualified Students 2015-16**

S.N.	Name of Student	Year	G.S.	Category
1	Satish Dhokare	Final B-Tech	32	OBC
2	Vibha Surwade	Final B-Tech	30	SC
3	Pravin Singh	Final B-Tech	25	OPEN

### **8.0 Achievements:**

#### **Dr. K. Vadrajacharya**

#### **Publications:**

International Journal- 6

International conference- 12

#### **Serving in National committees/ editorial board:**

Advisory Board Member - Editorial board of Bioinfo Publication,

Fellow- Council for Engineers & Technologist (CET) of India,

Senior Member- ISRD (International society for Research and development).

Member, DAC (Dept Advisory Board) Modern College of Engineering Pune.

### **Book Review**

Reviewed a book on "Power Systems Analysis Illustrated with etap(R)" by CRC Publication.

### **Training Program Organized:**

#### **For supporting staff:**

01	Life Skills for Happy life	TEQIP	WCES	23-25 April, 2015
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02	Field Visit	TEQIP	SRTMN & SGGSN	28-09 to 01-10 2015
03	Safety Measures in Laboratories	TEQIP	DBATUL	25-29 Feb, 2016

#### For Students:

01	Leadership skills	IIIC & EED	DBATU, Lonere	31 October, 2015
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#### For Faculty:

01	Nature Inspired Computations in Engineering	TEQIP	DBATU, Lonere	18-22 May 2015
02	International Workshop on “Smart Technology”	TEQIP	IEEE Chapter Bangalore for faculty of EED	25-26 September, 2015
03	An Overview of Engineering Design Optimization	TEQIP	IIT Bombay	2- 6 November, 2015
04	Outcome based Education 2015	TEQIP	DY Patil, CoE, Pune	9-10 January, 2016
05	International Summit on WOSA	TEQIP	NBA, New Delhi	18- 20 March, 2016

#### Publications

##### International Journals:

Swaraj S. Kadam, K. Vadirajacharya, “Hybrid Renewable Energy for Rural Electrification by Using 1 Phase Supply” International Journal of Applied Engineering Research(IJAER), Volume 10, Number 44 (2015) pp.31580-31584.

Swaraj S. Kadam, K. Vadirajacharya, “Hybrid Renewable Energy for Rural Electrification by Using 1 Phase Supply” awaiting to be published in Springer AISC series, June 2015.

Omprakash Mankar, .Dr. K. Vadirajacharya,” Kalman Filter Analysis in Dynamics State of Power System”, International Research Journal of Engineering and Technology (IRJET) Volume 2, Issue 6 September 2015, pp.1170-1173.

Mithun Aush, Manoj D. Patil, K. Vadirajacharya, “Performance Analysis of Multilevel Inverter for Grid Connected System” in International Journal of Applied Engineering Research (IJAER), Print ISSN: 0973-4562, Online ISSN: 1087-1090, April 2015, Special Issues, Volume-10, Number-9, pp.8762-8764.

Manoj D. Patil, Mithun Aush, K. Vadirajacharya, “Grid Tied Solar Inverter at Distribution Level with Power Quality Improvement” in International Journal of Applied Engineering Research (IJAER), Print ISSN: 0973-4562, Online ISSN: 1087-1090, April 2015, Special Issues, Volume-10, Number-9, pp.8741-8745.

Chetan W. Jadhao, K. Vadirajacharya, “Optimal Placing of FACTS Devices to Improve Power System Security”, International Journal of Engineering Research and Technology (IJERT), Vol.4, May-2015.

Dhansri Pawar, K. Vadirajacharya, “Design of Shunt active filter to Improve Power quality Using PQ Theory”, IJERT , Vol-5, Issue-3, March 2016.

##### International Conference attended

Vivek Ahire, K. Vadirajacharya,” Microgrid Reconfiguration by Optimal DG placement Using PSO”, Proceedings of 26<sup>th</sup> IRF International Conference, 7th June 2015, Chennai, India pp-12-14, ISBN: 987-93-85465-30-7.

Swaraj S. Kadam, K. Vadirajacharya, “Hybrid Renewable Energy for Rural Electrification by Using 1 Phase Supply” proceedings of international Conference on Power, Circuit and Information Technologies (ICPCIT-2015) , May 2015.

Swaraj Kadam , K. Vadirajacharya “ Effects of Different Climatic conditions on PV system” proceedings of ICESA -2015, October 2015.

Swaraj S. Kadam, Chetan W. Jadhao, K. Vadirajacharya, and “Performance Analysis of Power System Security Using Sensitivity Indices Analysis Method” Proceedings of IEEE sponsored International Conference on Computation of Power, Energy, Information and Communication 22-23 April 2015, ISBN.978-1-4673-6524-6.

Ompraash Mankar, K. Vadirajacharya” State Estimation Analysis of a dynamic state using Kalman Filter on Power System” Proceedings of ICESA-2015, 30 October to 01 November 2015, DYPIET Pimpri, Pune India.

Mithun Aush, Manoj D. Patil, K. Vadirajacharya, “Performance Analysis of Multilevel Inverter for Grid Connected System” Proceedings of International Conference on ‘Engineering Technology and Science’ (ICETS’15) Muthayammal College of Engineering, Rasipuram, Tamilnadu, India 5<sup>th</sup> & 6<sup>th</sup> March 2015, Volume-1, pp.139-141.

Manoj D. Patil, Mithun Aush, K. Vadirajacharya, "Grid Tied Solar Inverter at Distribution Level with Power Quality Improvement" in International Conference on 'Engineering Technology and Science' (ICETS'15) organised by Muthayammal College of Engineering, Rasipuram, Tamilnadu, India on 5<sup>th</sup>& 6<sup>th</sup> March 2015, Volume-1, pp.105-109.

Chetan W. Jadhao, K. Vadirajacharya, "Performance Analysis of Power System Security Using Sensitivity Indices Analysis Method", IEEE Sponsored International Conference on Computational of Power, Energy, Information and Communication, April-2015, Melmaruvathur, Tamilnadu, India.

Chetan W. Jadhao, K. Vadirajacharya, "Optimal Placing of Static VAR Compensator Using Sensitivity Indices Method for Performance Improvement of Power System", International Conference on Advance Trends in Engineering, Technology and Research, June-2015, Kota, Rajasthan, India.

Chetan W. Jadhao, K. Vadirajacharya, "Performance Improvement of Power System Through Static VAR Compensator Using Sensitivity Indices Analysis Method", IEEE International Conference on Energy System And Application, October-2015, Pune, Maharashtra, India.

M. S. Bhise, K. Vadirajacharya, "Capacitor voltage balancing of Hybrid Converter Based on Nearest level control", 2015 International conference on Circuit, power and Computing Technologies( ICCPCT), March19-20, 2015, Noor Islam University, Kumarcouil Tamilnadu, India.

M. S. Bhise, K. Vadirajacharya, "Hybrid Modular converter: Application to Medium and high voltage Systems", International Conference on Computation of Power, energy, Information and Communication ( ICCPEIC-2015), April 22-23 2015, Adhiparashakti Engineering college, Melmaruvathure Tamilnadu, India.

Manoj D. Patil1, K. Vadirajacharya, "Grid Tied Solar Using 3-Phase Cascaded H-Bridge Multilevel Inverter at Distribution Level With Power Quality Improvement", Proceedings of VIVURTI 2016, ICETT 2016, DRIEM Nerul Mumbai, March17-18, 2016.

#### **U. V. Patil, Asst. Professor, M. E., Ph. D.**

#### **1. Conferences/Workshops/Trainings/Academic Awareness activities conducted:**

##### **STTPs / Workshop attended**

Outcome Based Education, D. Y. Patil Institute of Technology, Pimpri, Pune: 09-10 January, 2016  
Quality Initiatives in Technical and Higher Educational Institutes, ESCI, Hyderabad: 23-25 February, 2016.

##### **Industrial Visits**

ELECRAMA-2016, Bangalore: 13-14 February 2016  
Central Power Research Institute (CPRI), Bangalore: 13-14 February, 2016

#### **2. Publications /International Conferences**

Rohan Shinde, U. V. Patil, "Virtual DC Bus to Eliminate Common Mode Ground Leakage Current in PV System", IEEE int. conf. on Computation of Power, Energy, Information and Communication 2015, Tamilnadu.

Rohan Shinde, U. V. Patil, "Transformer less Six Switch Inverter for Grid Connected System", proceedings of 4<sup>th</sup> international conference on "Advanced Trend in Engineering, and Research (ICATERE – 2015), Balkrishna Institute of Technology, Kota, Rajasthan, 19-20 June 2015.

Sheetal C. Rahane, U. V. Patil, "Static Synchronous Series Compensator (SSSC) to Boost Power System Stability", IEEE int. conf. on Computation of Power, Energy, Information and Communication 2015, Tamilnadu.

#### **3. Academic Achievements of faculty: (Awards received, lectures delivered, etc.)**

##### **Lectures delivered**

One week STTP on "Robotics and Applications", June 13 – 19, 2015, Department of Mechanical, PES-COE, Aurangabad.  
(Topic: Advanced DC drives for Robotics Applications: one session)

##### **Others**

Member IEEE  
Reviewed IEEE transaction Papers (Power Electronics, Industrial Electronics)

##### **B.Tech Projects**

S.N.	Title of Project	Guide
1.	PV Based efficient and reliable water pumping system	Dr. P.K. Katti
2.	Magnetic Levitated Vertical Axis Wind Turbine	
3.	Bagasse based cogeneration in sugar factory	
4.	Nine Switch Converter with independent control of two loads	Dr. K. Vadrajacharya
5.	Android based speed control of induction motor	
6.	Wireless DC motor speed & direction control using ZIGBEE	
7.	Electromagnetic Rail-gun	M.F.A.R. Satarkar
8.	RF based multi channel control of electrical appliances	
9.	3 Phase current limiting transformer	
10.	Universal Supply Unit	Dr. U.V. Patil
11.	V/F control of induction motor drive	
12.	Single input multiple output DC -DC Converter	
13.	Case study o HVDC Padghe Substation	R.H. Madhavi
14.	Microgrid design for Dr. B.A.T.U. Lonere	
15.	Power theft detection in power system	
16.	Sensor controlled street lighting system for power saving	

\* \* \*

## **Department of Electronics and Telecommunication Engineering**



**Dr. S. L .Nalbalwar**  
**Associate Professor & Head**

### **Message from the Head of Department**

This gives me incalculable happiness to present the annual report of my department, we aim to meet the growing demand of Electronics Engineers in the Government and private sectors, the Department of Electronics and Telecommunication Engineering is taking best efforts by producing highly trained and capable engineers, who can take up the challenges of the real world.

The two key objectives of the department are to maintain high academic standards and to give due weightage to practical work. The department has a fine blend of renowned as well as young and dynamic personalities as faculty, who are involved in imparting quality education. The faculty strives not only to foster but also to encourage a teaching methodology which includes both practical and theoretical approaches as well. This orientation has led to successful projects and training.

The Department is wide open to innovative ideas, methodologies to establish itself as the most sought excellent learning center in this part of the state.

The lab facilities are being upgraded from time to time and provide adequate opportunities for the students to learn and innovate. The Department is conducting special classes for preparation of GATE examinations. The Department also organizes interactive lectures every week by inviting Alumni and Technocrats from industries to guide students and to make them aware about needs of outside world, this helps students in their overall development. Department also regularly organizes training programmes, workshops, exhibition, Idea competition, conference and soft skills development programmes, which help them to understand the theoretical aspects and also do the value additions in them. Department regularly receives sizable amount of grants from AICTE, UGC, TEQIP, RUSA and other Government agencies for various research projects.

Departmental students association has been established by the students for the extracurricular activities. This association conducts various technical and cultural events regularly. "Engineers are the creators of the new world", going with these lines the Department has a fully equipped Project lab to encourage the students to show their creativity. Educational tours and industrial visits are regularly organized to enhance the practical knowledge of the students with the recent technologies used in the industry.

## **1. Vision and Mission Statements for Department**

### **Vision**

The vision of the department is to achieve excellence in teaching, learning, research and transfer of technology for development of society.

### **Mission**

Department of Electronics and Telecommunication Engineering constantly aims at providing quality education and works in pace with the modern scientific and technological development.

## **2. About the Department**

The department of Electronics and Telecommunication Engineering was established in the year 1995 initially with B. Tech. programme with intake of 60 students. In 2001, M. Tech programme in Electronics & Telecommunication Engineering with an intake of 18 students was introduced. From the academic year 2008-2009, intake of B. Tech. has been increased to 120 students. The department has started Ph.D programme from the academic year 2003, presently 20 research scholars are working in the research area of signal processing, computer network and microwave communication. Department is also offering fellowship to M. Tech and Ph.D. students under TEQIP project.

The curriculum designed is a perfect blend of Electronics, Communication and Computing Technologies. The focus of the department is to produce graduates & post graduates with strong fundamentals in Electronics and Communication domain.

The department has received handful amount of funding from AICTE, UGC, TEQIP and State Government for various research projects. The department has state of the art laboratories to cater for curricular requirements as well as projects and research.

The faculty members are having strong background of research in the current issues of the discipline. The budding graduates from this discipline have very good job opportunities in VLSI Technologies, Embedded Systems, Signal Processing, Radio Frequency (RF) Communication, Mobile communication and in Software Engineering. Many of our students placed in industries like Infosys, TCS, Cognizant, Persistent, Siemens, Huawei, Reliance Communication, Prayas Software Ltd, JSW ISPAT, RCF, Videocon, ONGC, BHEL, BEL, GE, L & T, Sasken, MBT, Texas, Accenture, Mahagenco, Motorola, CapGemini, Flextronics, NVIDIA, Patney Computers, Reliance Jio, Hexaware, Tataelxsi, BSE, City bank, etc and got admitted for higher education (M.Tech/Ph.D programme) in institute of high repute such as IIMs, IITs and NITs.

Good number of students of this department competes in the competitive examinations like GATE, CAT, TOFEL, and GRE. Many students go abroad to perceive higher studies. As an essential part of the academic schedule, the students have to undergo industrial training at the end of second and third year during summer in industries of repute around us. To get an industrial exposure the department also arranges Industrial Visits to reputed industries in electronics, communication and computing area. There is an overwhelming participation of students in conferences, seminars, workshops, paper publications, annual sports. The department regularly organizes workshops, training, seminars, expert lectures and conference in the emerging areas of electronics and communication engineering.

- Dr. S. L .Nalbalwar

## **3. Program Educational Objectives (PEOs) & Programme Outcomes (POs)**

### **Programme Educational Objectives (PEOs)**

- To prepare students to excel in technical fields in order to pursue postgraduate programs or to succeed in industry/technical profession, R&D institutions through global and new emerging areas in Electronics and Telecommunication engineering
- To provide students with a solid foundation in mathematical, scientific and engineering fundamentals required to solve engineering problems
- To train students with good scientific and engineering breadth in core subjects so as to comprehend and simulate to cater changing needs of society, analyze, design, and create novel products and solutions for the real life problems
- To develop in students, professional and ethical attitude, effective communication skills, leadership, teamwork skills, multidisciplinary approach, and an ability to relate engineering issues to broader socio-economic context

- To provide students with conducive academic environment, awareness of excellence and the life-long learning needed for successful professional career.

### **Programme Outcomes (POs)**

- The graduates will possess the knowledge of differential equations, vector calculus, complex variable, matrix theory, probability theory, physics, chemistry and electrical & electronics engineering
- The graduate will demonstrate ability to identify, formulate and solve Electronics & Telecommunication engineering problems
- The graduates will have ability to design electronic circuits and systems, analyze and interpret data.
- The graduates will have ability to design digital and analog systems and components
- The graduates will possess the knowledge of advanced and emerging topics in the fields of Electronics, Signal Processing and Communication
- The graduates will demonstrate the skills to use modern engineering tools, software and equipment to analyze and solve real-life problems
- The graduate will have broad understanding of the impact of Electronics and Telecommunication field in economic, environmental and social context and also will be aware of the contemporary issues
- The graduates will possess communication skills necessary to communicate engineering ideas. The skills set include verbal, written and listening skills.
- The graduates will demonstrate the ability to work and collaborate in heterogeneous teams.
- The graduates will demonstrate the awareness of professional and ethical responsibilities
- The graduates will develop self-confidence and ability for lifelong learning

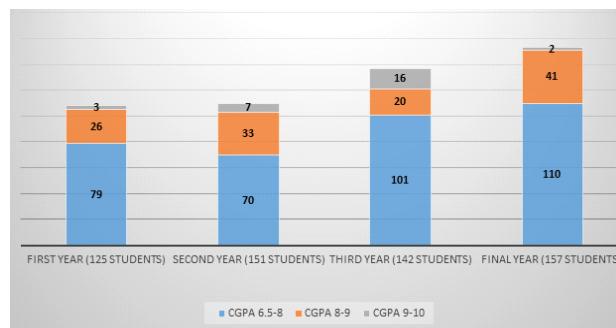
#### **4. Overview of Academic Programs**

Academic Programme												Duration	Intake
Bachelor of Technology (B.Tech.)												Four Years	120
Master of Technology (M.Tech.)												Two Years	18
Ph.D. (Registered)												20 Research Scholars	

#### **5.1 UG Students Statistical Information**

Year	Open			SC			ST			OBC			VJNT			SBC			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
First	29	14	<b>43</b>	15	4	<b>19</b>	3	3	<b>6</b>	28	13	<b>41</b>	13	3	<b>16</b>	3	0	<b>3</b>	91	37	<b>128</b>
Second	29	24	<b>53</b>	18	3	<b>21</b>	1	3	<b>4</b>	29	24	<b>53</b>	8	5	<b>13</b>	3	1	<b>4</b>	88	60	<b>148</b>
Third	32	21	<b>53</b>	12	7	<b>19</b>	9	2	<b>11</b>	25	21	<b>46</b>	4	7	<b>11</b>	1	2	<b>3</b>	83	60	<b>143</b>
Four	31	25	<b>56</b>	10	8	<b>18</b>	3	2	<b>5</b>	21	14	<b>35</b>	16	6	<b>22</b>	4	0	<b>4</b>	85	55	<b>140</b>

#### **5.2 Result Analysis**



**Number of passing undergraduates in each year of the course are as shown in the chart for current academic year**

#### **5.3 Campus Placements**

Placement Statistics		
2011-2012	Cognizant	<b>48</b>

	Persistent	<b>2</b>
	JSW Ispat	<b>1</b>
2012-2013	Prayas Software Solutions	<b>22</b>
2013-2014	Cognizant	<b>13</b>
	PALADIAN	<b>1</b>
	IBM	<b>1</b>
	TCS	<b>1</b>
2014-2015	Infosys	<b>9</b>

## 5. Faculty and Staff

### Faculty



Dr. S. L. Nalbalwar  
 B. E. (CSE), S. G. G. S.  
 College of Engineering &  
 Technology, Nanded  
 M. E. (EC), S. G. G. S.  
 College of Engineering &  
 Technology, Nanded  
 Ph.D. (Comm. Engg.), Indian  
 Institute of Technology, Delhi  
 25 Years of Experience



Dr. A. B. Nandgaonkar  
 B.E. (Electronics & Telecomm.  
 Engg.), Govt. Engg. College,  
 Aurangabad  
 M. E. (Electronics), Govt.  
 Engg. College, Aurangabad  
 Ph.D. (Electronics &  
 Telecomm. Engineering), Dr.  
 B.A.T.U. Lonere  
 23 Years of Experience



Dr. S. B. Deosarkar  
 B.E., Shri Sant Gajanan  
 Maharaj College of  
 Engineering, Shegaon  
 M.E. S. G. G. S. College of  
 Engineering & Technology,  
 Nanded  
 Ph.D SRTMU, Nanded  
 26 Years of Experience



Prof. N. S. Jadhav  
 B. Tech., Dr. B.A.T.U., Lonere  
 M. Tech., Dr. B.A.T.U., Lonere  
 Ph.D. (Pursuing)  
 12 Years of Experience



Prof. S. V. Khobragade  
 B. E. (Electronics  
 Engineering) -Nagpur  
 University, Nagpur  
 M. E. (Electronics  
 Engineering) -Mumbai  
 University, Mumbai  
 Ph.D. (Pursuing)  
 17 Years of Experience



Dr. B. R. Iyer  
 B. E., Dr. B. A. M. U.,  
 Aurangabad  
 M. Tech., Dr. B.A.T.U., Lonere  
 Ph.D., IIT Roorkee  
 10 Years of Experience

### Faculty on Contract



Ms. R. D. Sheth  
 Assistant Professor  
 B. Tech., M. Tech.  
 Dr. B.A.T.U., Lonere  
 Experience-3 Years



Mr. A. A. Jangam  
 Assistant Professor  
 B. Tech., M. Tech.  
 Dr. B.A.T.U., Lonere  
 Experience-3 Years



Mr. M. V. Buktare  
Assistant Professor  
B. Tech., S. G. G. S., Nanded  
M. Tech. Dr. B.A.T.U., Lonere  
Experience-3 Years



Mr. K. S. Kamble  
Assistant Professor  
B. Tech., S. G. G. S., Nanded  
M. Tech., Dr. B.A.T.U., Lonere  
Experience-1 Year



Mr. S. V. Isai  
Assistant Professor  
B. Tech., Dr. B.A.T.U., Lonere  
M. Tech., VJTI, Mumbai



Mr. Ramesh V. Bandgar  
Assistant Professor  
BE  
M.Tech., Dr. B.A.T.U., Lonere



Mr. S. S. Shinde  
Assistant Professor  
B. Tech., Dr. B.A.T.U., Lonere  
M. Tech., Dr. B.A.T.U., Lonere  
Experience-1 Year

#### Supporting Staff



Mr. R. M. Chavan  
Lab Technician  
C.E.A. (BTE)  
Mumbai  
B.A. (Mumbai  
Univ.)



Mr. S. T. Jadhav  
Lab Technician  
B.Sc. (Physics)



Ms. S. S. Patil  
Lab Technician  
B.Sc. (Physics)

#### 6. Additional Responsibilities to the Faculty

##### Dr. S.L. Nalbalwar

1. Member of Executive and Academic Council
3. TEQIP-MIS Co-ordinator
5. AQAR Co-ordinator
7. NIRF Co-ordinator
9. NBA Co-ordinator
11. Member of University Library Committee
13. Member of Industry, Institute and Interaction Cell of TEQIP
14. System Administrator for QEEE Programme
16. Member, BOS, University of Pune  
VJTI, Mumbai
18. Co-ordinator, Digital India Programme
20. Co-ordinator for Examinations Rules and Regulations for Ph. D. Programme
2. Co-ordinator for AICTE activities
4. In-charge of University Computer Center
6. RUSA Co-ordinator
8. AISHE Co-ordinator
10. Intercom Service Co-ordinator
12. Member of University Finance Committee
15. Chairman, CCTV Procurement for Raigad  
District
17. Research and Recognition Committee Member,
19. Member of Central Purchase Committee

##### Prof. S.V. Khobragade

1. Women Grievance Cell
3. Co-ordinator for TEQIP Equity Cell
2. Co-ordinator for UGC remedial Coaching classes
4. Co-ordinator for Avishkar-2015

##### Dr. A.B. Nandgaonkar

1. Head of TEQIP procurement, SPFU, Maharashtra
3. Member of BOS, VIIT, Pune
2. Rector, Alaknanda Hostel

### **Dr. B.R. Iyer**

1. Faculty Advisor, TEESA
2. Co-ordinator, University Statutes and Ordinance Committee
3. Rector, Hostel Gagangiri
4. Co-ordinator, TEQIP-II R&D Cell
5. Member, Disaster Management Cell
6. Member, University Technical Event Committee
7. Co-ordinator, Digital India Programme

### **Advisory Board and BoS**

#### **Advisory Board**

To provide time to time guidance and monitor the activities for the development of the department, Advisory Board for E & TC department is formed. Following are the members from reputed industry and academic institutes. The Advisory Council/Board is entrusted with responsibility of conducting academic audit of department, suggesting dynamic curriculum and providing input for research activities.

S.N.	Name	Designation
1	Lt. Cdr. (Retd.) Ravindra Kale	Sr. Program Manager, Tata Communication Ltd., Mumbai.
2	Dr. Munir Sayyad	General Manager and Head of Reliance JIO Quality Assurance Lab, Mumbai
3	Suresh Lok	Senior Vice-President Consulting Innovation and Evaluation for New Age Services at International Innovation, Incubation and Training Center, Navi Mumbai
4	Santosh B. Gadewar	DGM-SAP, IT Business Solutions, Larsen & Toubro Limited, EAIC, Powai, Mumbai-400072
5	Dr. V.M. Gadre	Professor, Electrical Engineering, IIT Bombay
6	Dr. R.R. Manthalkar	Professor, Department of E & TC, SGGSIE & T Nanded, MS
7	Dr. S.G. Bhirud	Professor, E & TC VJTI, Mumbai

### **Board of Studies**

S.N.	Name	
1	Dr. S. L. Nalbalwar, Head, Department of Electronics and Telecommunication Engineering, Dr. Babasaheb Ambedkar Technological University, Lonere- Raigad	Chairman
2	Dr. S. B. Deosarkar, Department of Electronics and Telecommunication Engineering, Dr. Babasaheb Ambedkar Technological University, Lonere- Raigad	Member
3	Dr. D. S. Karanjkar, Institute of Petrochemical Engineering, Lonere	Member
4	Dr. Munir Bashir Sayyad, Head Reliance Jio Innovation & Test Labs ( General Manager)	Expert
5	Prof. S. V. Khobragade, Department of Electronics & Telecommunication Engg., Dr. Babasaheb Ambedkar Technological University, Lonere- Raigad	Co-opted Member
6	Dr. A. B. Nandgaonkar, Department of Electronics & Telecommunication Engg., Dr. Babasaheb Ambedkar Technological University, Lonere- Raigad	Co-opted Member

### **7. Faculty Research and Publications**

#### **Research Projects**

RPS project improving the perception of Sensori neural hearing impaired by developing optimized signal processing algorithm for hearing aids. 20/AICTE/RIFD/RPS (Policy-2)-69/2012-13 Dated 4/2/2013

Sponsoring Agency	AICTE Delhi
Sanctioned Amount	7,55,000/-
Principal Investigator	Dr. S. L. Nalbalwar

#### **Research Publications**

- [1] Ashwini. S. Wadekar, Prof. S. V. Khobragade, "Design of Multiband Monopole Triangular Fractal Antenna For GSM, Bluetooth And Wi-Fi", 5th IEEE International Advanced Computing Conference (IACC-2015), PP-988-991.
- [2] Prashant V. Bandgar, S. V. Khobragade, "A Concurrent Dual Band LNA Using Frequency Transformation Based Matching Network for WCDMA and Navigational C Band Application", accepted in Fourth International Conference on Advances in Computing, Communications and Informatics (ICACCI-2015), 10-13th August, 2015, Kochi.

- [3] Ramesh V. Bandgar, Dr. Sanjay L. Nalbalwar, Prof. Atul Kulkarni, Prof. Swarali Sheth" Performance analysis of Turbo coded OFDM over Uncoded and Convolutional coded OFDM" in Proceeding of IRF International Conference ICEECE- 2015,Tirupati, pp 5-8.
- [4] Mangesh J. Joshi, Dr. A. B. Nandgaonkar, "Third Order Wideband Bandpass Filter for ISM Band Using Stepped and Hairpin Composite", accepted in Fourth International Conference on Advances in Computing, Communications and Informatics (ICACCI-2015), 10-13th August, 2015, Kochi.
- [5] Sayali. S. Kuchekar, Dr. Sanjay. L. Nalbalwar, Prof. Swarali. Sheth, "Multi oriented Text Detection in the Video", International Conference on Advances in Electrical, Power Control, Electronics and Communication Engineering (AEPCECE-2015).
- [6] Pratima Nirmal, Dr. A.B. Nandgaonkar "A compact H Shaped MIMO Antenna with an Improved isolation for WLAN application" 9th International Conference on "Advanced Computing and Communication Technologies" ICACCT 2015, Springer Science in Advances in Intelligent system and Computing dated 27-29<sup>th</sup>November, 2015, Panipat, India.
- [7] Pratima Nirmal, Dr. Nandgaonkar "Circularly Polarized High Gain Antenna using array of parasitic patches on superstrate layer", 12th IEEE India International conference Indicon 2015, 17-20<sup>th</sup>December, 2015, Delhi, India.
- [10] Yuvraj Parkale and Dr. S.L. Nalbalwar, "Application of Compressed Sensing (CS) for ECG Signal Compression: A Review", International conference on Data Engineering and communication Technology (ICDECT 2016), Springer, Pune
- [11] Manasi Patil, Dr. B. R. Iyer, Rajiv Arya, "Performance Evaluation of PCA and ICA Algorithm for Facial Expression Recognition Application", International conference on soft Computing for Problem Solving (SOCPROS) 2015, IIT Roorkee,
- [12] Snehal S. Gaikwad, Pallavi P. Ingale, Dr. S. L. Nalbalwar, "Separation of singing voice from background musical noise using modified NMF and Filtering," IEEE International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT) – 2016, Chennai.
- [13] Indrajeet Phutane, Dr. Sanjay Nalbalwar, "A New Method for Secret Image Transmission via Secret Fragment Visible Mosaic Image", IEEE International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT) – 2016, Chennai.
- [14] Sayali Wani, Dr. Sanjay Nalbalwar, "Identification of Balanced Nodes for Data Aggregation in Wireless Sensor Network", IEEE International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT) – 2016, Chennai.
- [15] Harshal Chaudhari, Dr. Sanjay Nalbalwar, Rashmee Sheth, "A Review on Intrinsic Mode Function of EMD", IEEE International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT) – 2016, Chennai.
- [16] Pallavi Ingale, Dr. Sanjay Nalbalwar, "Cochannel Speech Segregation with Sparse Coding", IEEE International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT) – 2016, Chennai.
- [17] Munde Rushikesh ,Vipul Manwar, Rashmee Sheth, " Gesture controlled surveillance robot for military use," International conference on, Kolhapur ,2015
- [18] Rohit Gawande, S. L. Nalbalwar, " A Single hop Energy and Position Based Clustering Protocol for Wireless Sensor Networks", IEEE International conference on Wireless Communication, Signal Processing and Networking, 23-25th March 2016, Chennai
- [19] Yuvraj Parkale, Dr. S. L. Nalbalwar, " Compressed Sensing for Musical Signal Processing based on structured class of Sensing Matrices", IEEE International conference on Wireless Communication, Signal Processing and Networking, 23-25th March 2016, Chennai
- [20] Viren Chaudhari, Pramod Borkar, Aniket Jangam, " High Selectivity Dual Band Filter Design by Optimization of Interdigital Structure", International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT) – 2016, Chennai.
- [21] Pratima Nirmal, Dr. A. B. Nandgaonkar and Dr. S. L. Nalbalwar, " MIMO Antenna : A Study on Reducing Mutual Coupling and Improving Isolation", published in proceedings of IEEE conference on Recent Trends in Electronics, Information and Communication Technologies at Bangalore during May 20-21, 2016.
- [22] Vibha Walekar, Dr. Sanjay Khobragade, Dr. S.L. Nalbalwar and Pratima Nirmal, "A Slotted multiband Monopole antenna for GPS, WI-Max, WLAN and Satellite applications" , published in proceedings of IEEE conference on Recent Trends in Electronics, Information and
- [23] Mahesh Kendre, Dr. A. B. Nandgaonkar, Dr. S.L. Nalbalwar & Pratima Nirmal : U Shaped Multiband Monopole Antenna for Spacecraft, WLAN and Satellite Communication Application, published in proceedings of IEEE conference on Recent Trends in Electronics, Information and Communication Technologies at Bangalore during May 20-21,2016.
- [24] Krishnat Pawar and Dr. S.L. Nalbalwar, "Adaptive Canny Edge Detector Algorithm using Morphological filter", published in proceedings of IEEE conference on Recent Trends in Electronics, Information and Communication Technologies at Bangalore during May 20-21,2016.

- [25] Tejkiran patil and Dr. A. B. Nandgaonkar , "Ultrawideband Antennas for High data rate and low mutual coupling using circular reflector", published in proceedings of IEEE conference on Recent Trends in Electronics, Information and Communication Technologies at Bangalore during May 20-21,2016
- [26] Sanket Bhagat and Dr. S. L. Nalbalwar, " Lab view based Tool condition monitoring and control for CNC lathe based on Parametric Analysis", published in proceedings of IEEE conference on Recent Trends in Electronics, Information and Communication Technologies at Bangalore during May 20-21,2016.
- [27] Yuvraj V. Parkale, Sanjay L. Nalbalwar, "Application of Compressed Sensing (CS) for ECG Signal Compression: A Review", Springer -The International Conference on Data Engineering and Communication Technology (ICDECT 2016), Lavasa City, Pune, March 10 -11, 2016.
- [28] M. Munde, G. Fernando, N. Fernandes, A. Gurav, A. Nandgaonkar, "ANDLINE : A simple solution for the cons of using a mobile phone," 2015 IEEE UP Section Conference on Electrical Computer and Electronics (UPCON), Allahabad, India, 2015, pp. 1-5.

### **National Conference Publications**

- [1] Chaitanya G. Nilkar, Sanket Bhagat, Dr. S. L. Nalbalwar, "Lab-VIEW Based Data Acquisition and Analysis System for TCM of CNC Turning Lathe", published in National Conference on Computer, Electrical and Electronics Engineering.
- [2] Chaitanya G. Nilkar, Sanket Bhagat, Dr. A. B. Nandgaonkar, "Power Transformer Monitoring and Controlled Based on Parameters Analysis", published in National Conference on Computer, Electrical and Electronics Engineering.
- [3] Snehal Gaikwad, Harshal Chaudhari, Mahesh Meshram, Dr. Sanjay Nalbalwar, "Multistage modified Nonnegative Matrix Factorization and Filtering for Separation of singing voice", published in National Conference on Computer, Electrical and Electronics Engineering.
- [4] Mahesh H. Meshram, Sanjay Nalbalwar, Snehal Gaikwad, Harshal Chaudhari, "Full-Reference Image Quality Assessment for Biometric Application", published in National Conference on Computer, Electrical and Electronics Engineering .
- [5] Hemant H Patil, Sanjay V. Khobragade, Milind P Bhagat, "Design of multiband H-fractal antenna for WLAN applications", published in National Conference on Computer, Electrical and Electronics Engineering.
- [6] Hemant H Patil, Sanjay V. Khobragade, "Design of H-fractal antenna for WLAN Applications", published in RAST2K16, Finolex Academy, Ratnagiri.
- [7] Krishnat B. Pawar, Dr. Sanjay Nalbalwar, "Improved Canny Operator Edge Detection Algorithm using Morphological Filters", published in National Conference on Computer, Electrical and Electronics Engineering (NCCEEE-2016).
- [8] Tejkiran Arun Patil, Pratima Nirmal, Dr. Anil B. Nandgaonkar, "Ultra Wideband MIMO Antenna for High Isolation", published in National Conference on Computer, Electrical and Electronics Engineering (NCCEEE-2016).
- [9] Indrajeet Phutane, Dr. Sanjay Nalbalwar, "A Fast and Secure Image Transmission via Secret Fragment Visible Mosaic Image", published in National Conference on Computer, Electrical and Electronics Engineering (NCCEEE-2016).
- [10] Vivekanand Sonone, Mahesh Meshram, "Automatic Face Tracking Using Raspberry pi for Real Time Application", published in National Conference on Computer, Electrical and Electronics Engineering (NCCEEE-2016).
- [11] Chaitanya G. Nilkar, Sanket Bhagat, Dr. A. B. Nandgaonkar, "Power Transformer Monitoring and Controlled Based on Parameters Analysis", published in National Conference on Computer, Electrical and Electronics Engineering
- [12] Pharande Amitkumar R., Dr. Nalbalwar S.L., "IOT based Smart Connected Technology for Crushing Industry", published in National Conference on Computer, Electrical and Electronics Engineering
- [13] Mahesh Kendre, Dr. A. B. Nandgaonkar , Pratima Nirmal, Aashish Surti, Tejkiran Patil, "Dual Notch Ultrawide Band Monopole Antenna For WLAN And Satellite Communication Application", published in National Conference on Computer, Electrical and Electronics Engineering (NCCEEE-2016).
- [14] Harshal Chaudhari, Snehal Gaikwad, Mahesh Meshram, Sayali Wani, Dr. S. L. Nalbalwar, "Decomposition of Speech with Intrinsic Mode Function of EMD", published in NCCEEE-2016.
- [15] Gauri Joshi, Dr. A. B. Nandgaonkar "Patient monitoring system using Gsm technology", published in National Conference on Computer, Electrical and Electronics Engineering (NCCEEE-2016).
- [16] Ashish Shendre, Sanjay Nalbalwar, "Hidden Markov Models and its Application in Speech Recognition", published in National Conference on Computer, Electrical and Electronics Engineering (NCCEEE-2016).
- [17] Aashish Surti, Prof. Sanjay Khobragade, Tejkiran Patil, Mahesh Kendre, Pratima Nirmal, "Triple Band Square Ring Slot Antenna", published in National Conference on Computer, Electrical and Electronics Engineering (NCCEEE-2016).
- [18] Vibha Vishnu Walekar, Pratima C. Nirmal, Sanjay V. Khobragade, "W Shaped Microstrip Patch Antenna Using Parasitic Patches For GPS Application", published in National Conference on Computer, Electrical and Electronics Engineering

- [19] Sayali M. Wani, Harshal Chaudhari, Dr. S. L. Nalbalwar, "Probabilistic Network Model for Balanced Data Aggregation in Wireless Sensor Network", published in National Conference on Computer, Electrical and Electronics Engineering
- [20] Monali Sonawane, Pooja Zaware, Priyanka Wagh," Voice to the Voiceless: -An Embedded Approach with Android Platform", published in National Conference on Computer, Electrical and Electronics Engineering (NCCEEE-2016).
- [21] Yuvraj V. Parkale, Sanjay L. Nalbalwar, "Compressed Sensing (CS) for Speech Signal Processing: A Review", National Conference on Computer, Electrical and Electronics Engineering, IETE Cynosure, NCCEEE-2016, DBATU Lonere, Raigad, India, April 23-24, 2016.
- [22] Yuvraj V. Parkale, Sanjay L. Nalbalwar, "Compressive Sampling (CS) MRI", Poster Presentation in Avishkar 2015, 10th Maharashtra State Inter-University Research Convention, Savitribai Phule Pune University, February 2016.
- [23] Diksha, A. Gangwar, M. Munde, D. Chikhale, "A Review of Li-Fi Technology: Concept, Scope & its Applications," Third National Conference on Computer, Electrical and Electronics Engineering, Lonere, April 2016.
- [24] Amol B. Kotade, Dr. Anil B. Nandgaonkar and Dr. Sanjay L. Nalbalwar, "Effect of Scrambler on PAPR Reduction in OFDM," in Proc.

### **International Journals**

- [1] Brijesh Iyer, N. P. Pathak, D. Ghosh, "Dual-Input Dual-Output RF Sensor for Indoor Human Occupancy and Position Monitoring", IEEE Sensors Journal, vol.15, no.7, pp. 3959-3966, Jul.2015.
- [2] Brijesh Iyer, N. P. Pathak and D. Ghosh, "RF sensors for smart home applications", International Journal of System Assurance Engineering and Management (Springer), pp. 1-6, 2016, doi: 10.1007/s13198-016-0468-5.
- [3] Sayali. S. Kuchekar, Dr. Sanjay. L. Nalbalwar, Prof. Swarali. Sheth, "Detection of Multi oriented Text in Video frames", International Journal of Emerging Technology and Advanced Engineering, Vol-5, issue 7, July 2015.
- [4] Ramesh V. Bandgar, Dr. Sanjay L. Nalbalwar, Prof. Atul Kulkarni, Prof. Swarali Sheth, "Performance analysis of Turbo coded OFDM over Uncoded and Convolutional coded OFDM" in International Journal of Industrial Electronics and Electrical Engineering (IJIEEE), Volume 3, Issue 7. Impact factor: 2.51
- [5] S. Singh, A. Singh, D. Upadhyay, S. Pal, M. Munde, "Design and Fabrication of Microstrip Patch Antenna at 2.4 Ghz for WLAN Application using HFSS," IOSR Journal of Electronics and Communication Engineering, Vol. 1. pp. 1-6, April 2016
- [6] Rohit D. Gawade and S. L. Nalbalwar, " A Centralized Energy Efficient Distance Based Routing Protocol for Wireless Sensor Networks" Journal of Sensors, Volume 2016 (2016), Article ID 8313986, 8 pages <http://dx.doi.org/10.1155/2016/8313986>, Impact Factor: 1.182

## **11. Laboratory**

### **11.2 Major Instruments in Laboratory**

Department has state of the art research equipment and software in the area of Signal & Image Processing, Embedded Systems, Biomedical Electronics and Antenna & Microwave Engineering. These equipment include DSP starter kits, development boards, daughter cards to capture / process the images & video signals in real time mode, Spectrum analyzer, DSOs, RF signal Generator, Dual Channel arbitrary wave form function Generator, Microwave Communication Trainer, Synthesized Receiver, Fiber optics setup and various biomedical instruments, etc. The software related to above research areas include Cadence, IE3D, EMI Test, EM CAD, MATLAB, Proteus VSM, Quantic SI and Micro-wind.

S.N.	Name of Instrument	Qty.	Total Cost
1	Cadence EDA Tools	01	15,82,500
2	Compact Optical test Platform with SM 1310/1550 nm, JDSU MTS- 6000	01	3,99,000
3	LAN Trainer with LAN Simulation Software Hardware Scientech -5002A	01	2,47,500
4	MCS -03 microwave communication training system	01	2,08,620
5	UHF Antenna trainer & modeling system, 50-860MHz	01	1,99,175
6	HP Compaq Tablet PC ,TC 1100,1.1GHz/512/60GB/26.4Cm,TFT/ CDR/RWW	01	1,20,034
7	Software :- IE3D for windows NT/95 power pack (MM 060)	01	3,60,000
8	Software :- FIDELITY for windows 95 TN (fD060)	01	3,30,000
9	Softwares :- MD SPICE for windows NT (SP 060)	01	1,65,000
10	EMI-Test Software	01	6,58,000

11	EM CAD Software	01	1,24,000
12	Proteus VSM software	01	4,51,000
13	Quantic SI (1 user license)	01	7,49,000
14	MICROWIND Package Includes DS CH3 (10 User)	01	5,50,000
15	Proteus PCB software (01 user)	01	1,56,000
16	R & S Make RF Signal Generator , 3 GHz. Model No:- SM – 300	01	4,21,500
17	R & S Make Dual Channel Arbitrary wave form function Generator, AM – 300	01	4,28,125
18	Synthesized Receiver with RF Source	01	1,44,000
19	DSP development board with provision for daughter cards, DSP kits, various daughter cards, related software	01	10,00,000
20	AMITECH make 2.4 GHz Satellite Communication Lab with Spectrum Analyzer, Model: STC 24	01	2, 07,000
21	AMITECH make, Microwave Antenna Training system	01	2, 07,000
22	YOKOGOVA digital scope, 500 MHz band width, 4 Channel, 5G Samples/sec	01	6, 86, 662
23	FPGA Lab Trainer, Custom Board Implementation of FPGA Design, Universal Development platform for FPGA	01	1396500
24	HFSS software	01	577500
25	Embedded System	01	9,40,495
26	Simtel CD and Pen drive 5 user License	21	5,00,000

### 11.2 Laboratory Expenditure

S.N.	Name of the Laboratories	Total cost for Laboratories
1	Biomedical Engineering	3257585
2	Microprocessor & Microcontroller	663320
3	Fiber Optic Communication	3654254
4	Digital Communication	1531923
5	Digital Signal Processing	4045846
6	Digital Electronics	407913
7	Electronic Devices and Circuits	1847513
8	Principle of Communication Engineering	2255922
9	Electronic Measurements and Instrumentation	197294
10	Computer Networks	4579669
11	Microwave Theory and Technique	2830368
12	Advanced Antenna Theory	9291535
13	Digital System Design & VLSI	6001483
14	Embedded System	812050
15	Other Laboratory Materials	2346526
<b>Total Cost</b>		<b>43723201</b>

## 12. Projects

### 12.1 Major UG Projects

S.N.	Project Topic	
1	RFID based bus announcement system	
2	Character recognition from image	
3	Arduino based green house parameter controlling and monitoring system	
4	Automated irrigation system	
5	Microstrip patch antenna for WiMax application	
6	Wireless drip irrigation system with logging for green development condition	
7	New T-slot rectangular microstrip patch antenna	
8	Human voice controlled home appliances	
9	Home automation under Wi-Fi through android apps from any smart phone	
10	Navigation of powerpoint using hand gestures	
11	Locker opening and closing system using RFID, GSM and password	
12	Design, simulation and construction of stepped impedance microwave low pass filter	
13	Electronic hand gloves to display sign language	

14	Video steganography
15	Vehicle tracking and accident detection system
16	Automated control system in vehicle for air pollution detection
17	Single image super resolution
18	Intelligent traffic control using IR sensor and microcontroller
19	Industrial water pollution detection
20	New I slot rectangular microstrip patch antenna
21	Microcontroller based Hazardous gas detection and alerting system using GSM module
22	DMA controller using VHDL
23	Sun tracking solar panel
24	Microwave bandpass filter with compact structure
25	Digital Watermarking
26	RFID and GSM based electronic voting machine
27	Temperature notifier
28	Block matching algorithm for motion estimation video compression
29	Design and study of S shaped Microstrip antenna for WiMAX application
30	Wireless unmanned ground vehicle
31	Electricity billing meter using GSM modem
32	Prototype of driverless vehicle for smart city
33	Microstrip band pass filter Design
34	QRS complex detection using wavelet transform with myocardial infarction detection
35	Circular monopole microstrip antenna
36	Circular monopole microstrip antenna
37	Automation with visitor counter
38	Motion detection and surveillance using MATLAB
39	Hydraulic robot arm controlled by human arm
40	Designing of microstrip patch antenna at 2.4 GHz (E-shape)
41	4-element Microstrip patch antenna array
42	GSM based notice board
43	Hand motion control robot
44	Traffic light controller using ATmega328
45	Landslide monitoring system using multisensor
46	Automated Toll collection system using RFID and GSM
47	Communication through human body using
	Red Tacton
48	Double U slot rectangular microstrip patch antenna
49	Single U slot microstrip patch antenna
50	DTMF based cell phone operated robot
51	Password based electronic circuit breaker
52	Ultrasonic blind stick
53	Head movement based assist system for physically challenged
54	Wireless power theft monitoring system
55	Sleep sensing and alerting system
56	Token number display and security
57	RFID based smart trolley used in megamart automation
58	Heart rate measurement using microcontroller
59	Performance analysis of ATR and DTR receiver using MATLAB simulation
60	Digital Speedometer with password and speed limit controlling
61	Power harvesting device using piezo electric effect
62	GSM based train security
63	Automatic Rationing distribution system using Embedded system technology
64	Digital audio Watermarking using FFT
65	S shape microstrip patch antenna
66	Accident prevention using alcohol detection
67	A single band microstrip antenna for WiMax application
68	Robotic arm
69	Three way controlled robotic arm
70	Colour detection of object pointed by eye
71	Motion detector using NE555 timer
72	GSM based home security
73	Object (visitor) counter with automatic room light control
74	Coin based mobile charger
75	Bowtie antenna for satellite communication
76	Layer 3 VPN with OSPF protocol between CE PE
77	Design of microstrip patch antenna for wireless application
78	Arduino based environment monitoring system
79	Wireless luggage security alarm

## 12.2 UG Community Projects

S.N.	Community Project Name
1	A microcontroller based Stout Robot with automatic crack detection in railway tracks

2	using LED-LDR assembly
2	About development of computer application for school management system

3	Assistive device for Speech Impaired	14	Library Management System
4	Automatic Plant Irrigation	15	Marine boundary identification system
5	Automatic Toll Control System	16	Medical store management system
6	Bike rider's safety using helmet	17	One touch alarm system for women's safety using GSM
7	Blind Navigation System	18	Online portal for teacher and student interaction
8	Blood Bank Management System	19	Polyhouse
9	Classroom Automation	20	Portable Solar Powered Sprayer
10	Database management system of J.B. Sawant	21	Scrolling Display Using FPGA
11	Digital visitor counter	22	Seed Marketing Management System
12	Energy meter billing with load control over GSM with user programmable number features	23	Smart Farming
13	Home Security with multiple sensors and mobile messaging facility	24	ST Indicator
		25	Wireless Patent Monitoring System using ZigBee

### 12.3 PG Projects

#### Signal Denoising using Selective IMF approach and Hurst Exponent estimation

This project focuses on the denoising of signal by EMD. The idea is proposed of selecting the appropriate and then estimating Hurst component using DFA.

#### A Triple Band UWB Monopole Antenna for Spacecraft, WLAN and Satellite Communication

A triple band antenna resonant at three frequencies 2.8 GHz, 5.8 GHz ,10.1 GHz for Spacecraft, WLAN and Satellite communication applications. The frequency band over which the antenna radiates is between 2.8 and 10.8GHz with a VSWR<2 shows the UWB application. The antenna is highly efficient with an efficiency of more than 80% over the desired resonating bands. Moreover it has omnidirectional radiation pattern with a good directivity. The gain of more than 4 dBi is obtained over the desired resonating bands.

#### Multiband Inset-Fed Rectangular Corner-chopped Fractal Antenna

The upcoming wireless communication system has a sparked attention on multiband antenna technology. There has been a rapid development in compact designing of a multiband wireless communication technology. So this antenna can be used in a single device for multiband applications.

#### A New Secure Image Transmission via Secret-fragment visible mosaic image

In this project both secret and target images are divided into blocks and sorted according to avg std dev then color transformation is done on secret image known as image mosaicing so secret image looks like target image. To extract secret image from mosaic image reversible color transformation is done. Experimental results show that mosaicing gives accurate results.

#### Automatic face tracking system for real time application using Raspberry pi

In this digital world, we are rapidly moving towards online education area, where all the lectures of respective subject are available on internet. While recording an NPTEL lecture cameramen need to adjust camera according to the mentor move one position to other and because of these video quality gets degraded. Automatic face Tracking is the best attempt for NPTEL lecture video recording using Raspberry PI. Since we can track the face of mentor by PAN, TILT and ZOOM camera with high accuracy. The proposed system is used the HAAR Cascade Classifier to detect the face in real time application.

#### A Dual Band MIMO Antenna with High Isolation for WLAN Applications

In the field of the wireless communication systems and increasing their applications, dual band antenna with different shapes and design is in great demand and finds many uses in personal communication systems, small satellite communication terminals and other applications involving wireless communication. A dual band (2-2.6GHz) and (5.15-6GHz) MIMO antenna is designed for WLAN applications with high isolation which is below -20dB at all frequencies.

#### A new secure image transmission via secret fragment visible mosaic image

In this project both secret and target images are divided into blocks and sorted according to avg std dev then color transformation is done on secret image known as image mosaicing so secret image looks similar to target image. This created image is called as mosaic image. This mosaic image is transmitted through internet. Then at receiver side to extract secret image reversible color transformation is done. Experimental result shows that mosaicing gives accurate result.

## **Power Transformer Monitoring and Controlled Based on Parameters Analysis**

In present, power transformers need development of the data-acquisition system that can be used for condition monitoring, which results in faults detection as well as preventive factors. The main objective of the presented system is to monitor parameters of transformer remotely through Global System for Mobile (GSM), which will avoid need for any manual operating thus reducing human efforts. We proposed the embedded system design, to monitor parameters such as voltages, currents, temperature and coolant level. This system is remotely located at the transformer site in a control cabinet which collects and analyzes all data for every defined interval.

## **LabVIEW Based Data Acquisition and Tool Condition Monitoring & Control Based on Parameter Analysis**

Tool Condition Monitoring is very fundamental area of any manufacturing Industry as tool wear can affect machine life, quality of work-piece and hence quality of final product which can affect productivity or rate of production of the industries. Therefore project deals with tool condition monitoring and control of CNC lathe machine integrated with data acquisition of all parameter that sensed by different sensors. Project aimed to develop a LabVIEW Interaction module which can sense different parameter for the further processing.

### **13. Doctoral Programme**

#### **13.1 List of Ph.D Students**

S.N.	Name of the Candidate	Registration Number & Date	Broad area of research	Research Guide
1	Rohit Gawade	RS 20120302 24/09/2012	Development of Energy Efficient Techniques for Wireless Network	Dr. S.L. Nalbalwar
2	Pavan Paikrao	RS 20120303 24/09/2012	Developing Optimized Signal Processing Techniques for Improving the perception of Hearing Impaired	Dr. S.L. Nalbalwar
3	Pallavi Ingale	RS 20130301 13/08/2013	An Information Extraction Approach to Acoustic Signal Processing: Analysis, Segregation and Detection	Dr. S.L. Nalbalwar
4	Yuvraj Parkale	RS 20130302 13/08/2013	Development of Compressed Sensing Techniques for 1-D and 2-D Signals	Dr. S.L. Nalbalwar
5	V.V. Ingale	RS 20090302 09/02/2010	Some Studies on HRV Signal Processing	Dr. S.L. Nalbalwar
6	M.P. Bhagat	RS 20090303 10/02/2010	Wireless Power Transmission	Dr. S.L. Nalbalwar
7	S.L. Kotgire	RS 20060304 24/01/2007	An Overview of Bandwidth Enhancement, ISI And Multipath Fading With Respect to OFDM	Dr. S.B. Deosarkar
8	Bhide Girish Govind	RS20140301 20/8/2014	Analysis, Simulation and Design of MSA using suitable Computational EM Method	Dr. A.B. Nandgaonkar
9	Khobragade Sanjay V.	RS20140302 21/8/2014	Some studies on Fractal Tree MSA for Multiband Application	Dr. S.L. Nalbalwar Dr. A.B. Nandgaonkar
10	Kotade Amol Bhaskar	RS20140303 19/8/2014	Analysis of PAPR reduction in OFDM based system and system performance improvement	Dr. A.B. Nandgaonkar Dr. S.L. Nalbalwar
11	Nirmal Pratima Chabbilal	RS20140304 20/8/2014	Minimizing Mutual Coupling in MIMO Antenna	Dr. A.B. Nandgaonkar Dr. S.L. Nalbalwar
12	Shinde Ashok Naganath	RS20140306 21/8/2014	Compressed Sensing for Biosignals	Dr. S.L. Nalbalwar Dr. A.B. Nandgaonkar
13	Bavkar Sandeep Sarjerao	RS20150301 10/09/2015	Human Brain Distinctiveness Analysis based on EEG	Dr. Brijesh Iyer Dr. S.B. Deosarkar
14	Jagtap Sagar Satyawan	RS20150302 10/09/2015	Some Studies on Smart Antenna for future Wireless Communication	Dr. Brijesh Iyer Dr. S.B. Deosarkar
15	Sheth Swarali Prashant	RS20150308 12/09/2015	Some Studies on Analysis, Classification and Representation of EEG Signals	Dr. S.L. Nalbalwar Dr. A.B. Nandgaonkar
16	Oak Pratik Vinayak	RS20150307 09/09/2015	Analysis and Detection of Cervix Cancer: An Image Processing Approach	Dr. Brijesh Iyer Dr. S.B. Deosarkar

17	Kadge Sushma Shankar	RS20150303 11/09/2015	Analysis and Classification of Retinal Images	Dr. S.L. Nalbalwar Dr. A.B. Nandgaonkar
18	Munde Mahesh Madanrao	RS20150306 09/09/2015	Impact Analysis of effects of RF on Human Health	Dr. S.B. Deosarkar Dr. A.B. Nandgaonkar
19	Khadase Rahul Babarao	RS20150304 10/09/2015	Design of Implantable Antenna as a Sensor for Continuous Glucose Monitoring System	Dr. A.B. Nandgaonkar
20	Uday Prakash Mithapelli	RS20150305 11/09/2015	Analysis and Classification under water signals	Dr. Brijesh Iyer Dr. S.B. Deosarkar

## 14. Industry Institute Interaction

### 14.1 MoU Signed by the department

#### i. MoU for Wi-Fi Connectivity in the entire campus:

Reliance JIO, Mumbai has agreed to provide required infrastructure for Wi-Fi connectivity in University premises without any charges. The matter was recommended by committee of three faculty members from E &TC and Computer Engg. Department and it is pending with University Infrastructure Committee. After getting approval from infrastructure committee, MoU will be signed.

#### ii. MoU for Communication Lab development:

Under this MoU Reliance Jio, Mumbai is ready to setup state-of-the-art telecommunication lab under certain constraints. The constraints are two smart classrooms, with Fiber optics setup, high speed internet, room for server set up. Reviews and discussion of clauses in MoU are going on. Under this MoU course will be proposed by Reliance and expert from our University will be conducting the course. As and when required training will be provided to expert faculty who will be conducting the course. Final decision about the MoU will be taken by the end of May.

#### iii. MoU for FDP/SDP:

This MoU is executed with M/s Scientech Technologies Pvt. Ltd., Indore. The primary objective of this MoU are 1) Conducting training programs, 2)To participate in collaborative research and development projects, 3) To deliver expert lectures to UG/PG Students, 4) To arrange industrial visit

### 14.2 Industry Projects by the Students

Industrial projects benefit the students by making them aware of the trends/ activities carried out in an industry and will make them job ready. The student can contribute more effectively in classroom teaching with their views, knowledge and experience gained in industry. List of the industrial projects is as follows:

Roll No.	Name	Title of the Project	Name of the Company	Stipend Paid by Company (Rs.)
MT 2013 314	Ms. Monali Sonawane	Voice to the Voiceless on Android Platform	Vital Electronics & Manufacturing co. Ltd, Mahape, Navi Mumbai	5000/-
MT 2013 315	Mr. Sudhir Surwase	Design of voltage controlled oscillator in cadence tool	Vital Electronics & Manufacturing co. Ltd, Mahape, Navi Mumbai	5000/-
MT 2014 312	Ms Gauri Joshi	Patient Monitoring System using Zig-bee	Ananya Academy Pune	8000/-
MT 2014 314	Amit Pharande	Real time monitoring and detection of different parameters in Sand	Akash Ganga Construction Pvt. Ltd., Satara	25000/-
MT2014 310	Chaitanya Nilkar	Compact Remote Monitoring System for Power Transformer	NITCO Ltd, Alibagh	--

## 15. Industrial Visits

Department conducted a series of focused Industrial visits related to various subjects for the benefit of students.



**Interaction with Ed Gate Technologies representative  
Industrial visit during March 2016 for S. Y. B. Tech.**



**Industrial visit to IIBS Bangalore during October, 2015 for T. Y. B. Tech. Students**



**Interaction with Ed Gate Technologies representative: Industrial visit during October 2016 for T. Y. B. Tech. Students**



**Visit to Visvesvaraya Industrial and Tech. Museum during March 2016 for S. Y. B. Tech. Students**



**Visit to Hindustan Coca-Cola Beverages Pvt. Ltd, Bangalore during March 2016 for S. Y. B. Tech. Students**

## 16. Conferences/Workshops/Trainings/Academic Awareness activities conducted under TEQIP-II

S.N.	Name of the Course	Duration	Name of the Co-ordinator	Eminent Speakers
1	Career in Civil Services	05/10/2015	Mr. S. V. Khobragade	Unique Academy
2	Gesture Control Robotics	03/10/2015 to 04/10/2015	Dr. S. L. Nalbalwar	Infi-Zeal Technologies, Delhi
3	Internet of Things	16/10/2015	Mr. S. V. Khobragade	Dr. D. V. Kodavade
4	Practical EM for Modern Antennas, RF and Microwave Designs	25-27/09/2015	Dr. A. B. Nandgaonkar	Entuple Technologies, Bangalore
5	Ethical Hacking	10-11/09/2015	Dr. S. L. Nalbalwar	Mr. Oops
6	Sixth Sense Robotics	05-06/09/2015	Dr. S. L. Nalbalwar	Tech Bharat, Delhi in association with COEP
7	Simtel Software	22/07/2015	Dr. A. B. Nandgaonkar	Scientech Technologies

8	Embedded System	20/08/2015	Dr. B. R. Iyer	Global Technologies
9	Pedagogy and Outcome Based Education	03/10/2015	Dr. A. B. Nandgaonkar	Dr. Revankar, Professor, YASHADA, Pune
10	A Journey from Campus to Corporate	10/10/2015	Mr. S. V. Khobragade	Grad2Guru, Mumbai
11	Recent Advances in Wireless Communication (Expert Talk for PG students)	5/12/2015	Dr. S.L. Nalbalwar	Dr. Munir Sayyad, Head, Innovation Lab, Reliance Jio, Mumbai
12	Microwave Imaging and Stealth Applications	16/01/2016	Dr. B. R. Iyer	Dr. Dharmendra Singh, IITR
13	Wall Following Robotics	06/02/2016-07/02/2016	Dr. S.L. Nalbalwar	Infi-Zeal Technologies, Delhi
14	Wavelet Transform and its applications	02/03/2016	Dr. S.L. Nalbalwar	Prof. V. M. Gadre, IITB
15	Evaluation of OSS and BSS in Telecomm	23/04/2016	Dr. S.L. Nalbalwar	Shri. Suresh Lok, Senior VP, Consulting Innovation and Evaluation for New Age Services at International Innovation, Incubation and Training center, Navi Mumbai
16	e- Governance and Chain Management	23/04/2016	Dr. S.L. Nalbalwar	Prof. P.S. Revankar, Director, Center for Information, YASHADA (Yashwantrao Chavan Academy of Development Administration), Pune
17	Opportunities in Services	23/04/2016	Dr. A.B. Nandgaonkar	Ravindra Kale, Sr. Programme Manager, Tata Communication Ltd, Mumbai
18	Vocal Tract Shape Estimation	23/04/2016	Dr. S.L. Nalbalwar	Dr. Milind Shah, Professor & Head, Department of Electronics and Telecommunication Engg. Fr. C. Rodrigues Institute of Technology, Navi Mumbai
19	Internet of Things and Cloud	23/04/2016	Mr. S. V. Khobragade	Dr. Munir Sayyad, General Manager, Reliance JIO
20	Internet Security	23/04/2016	Mr. S. V. Khobragade	Dr. Bandu Meshram, Professor, Computer Engineering VJTI, Mumbai
21	Recent trends in Antenna Design	23/04/2016	Dr. S.L. Nalbalwar	Dr. S.B. Deosarkar
17	Introduction to OBE	24/04/2016	Dr. S.L. Nalbalwar	Dr. Archana Revankar, GCoE Aurangabad
18	Key note address on present scenario of Telecommunication Industry	23/04/2016	Dr. S.L. Nalbalwar	Shri. Suresh Lok, Senior VP, Consulting Innovation and Evaluation for New age Services at International Innovation, Incubation and Training center, Navi Mumbai
19	Phase Array Antenna and Applications	23/04/2016	Dr. A.B. Nandgaonkar	Dr. Kushal Tuckle, Chairman and Director, R & D, AGV Systems Pvt. Ltd., Mumbai
20	Internet Security	23/04/2016	Dr. S.L. Nalbalwar	Professor, Computer Engineering VJTI, Mumbai
21	Industrial Meet	19/03/2016	All faculty Members	Total 17 Members from different industry attend the meeting
22	Industry and Academia Meet	23/04/2016	Hon. Vice-Chancellor	5 Members from Industry and 4 from Academics were present

## 17. Expert Talks by Alumni

S.N.	Name of the Topic	Name of Alumni	Participants
1	ORACLE Systems, Database, Applications and Cloud: Overview	Anilkumar Pawar, Principal Solution Consultant, ORACLE India Private Limited	M.Tech. and Final Year Students
2	Advances in Information Theory and Coding	Bhushankumar N Shinde, NDMVPSS, KABG, Thakare College of Engg. Nasik	M.Tech. and Final Year Students
3	Career Options after PG	Prof. Sanjay Patil, A.C. College of Engineering, Navi Mumbai	M.Tech. and Final Year Students

## 18. Workshops attended by Faculty members, Research Scholars and PG Students

S.N.	Title	Date	No. of Participants
1	TEQIP-KITE interaction at IITB	29 <sup>th</sup> Feb, 2016 - 01 <sup>st</sup> March, 2016	14
2	CEP-TEQIP-KITE Course on "Digital Signal Processing" at IITB	02 <sup>nd</sup> to 06 <sup>th</sup> November, 2015	03
3	CEP-Optimization at IITB	02 <sup>nd</sup> to 06 <sup>th</sup> November, 2015	05
4	Project and exhibition on DSP based projects	20 <sup>th</sup> March, 2016	20
5	India Antenna Week	June 6 <sup>th</sup> to 10 <sup>th</sup> , 2016	01



Talk on Career in Civil Services by Unique Academy on 5<sup>th</sup> October, 2015



2-days Training on Gesture Control Robotics by Infi-Zeal Technologies, Delhi on 3<sup>rd</sup> - 4<sup>th</sup> October, 2015



3-days Training on Practical EM for Modern Antennas, RF and Microwave Designs By Entuple Technologies, Bangalore on 25<sup>th</sup> - 27<sup>th</sup> September, 2015



2-days Training on Ethical Hacking by Mr. Oops on 10<sup>th</sup> - 11<sup>th</sup> September, 2015



2-days Workshop on Sixth Sense Robotics by TechBharat, Delhi in association with COEP on 5<sup>th</sup> – 6<sup>th</sup> September, 2015



Expert talk on Microwave Imaging and Stealth Applications by Dr. Dhamendra Singh IIITR on 16<sup>th</sup> Jan, 2016

## 19. Other activities Conducted by Department

**National Conference (NCCEEE):** Department has successfully organized a National Conference on Computer, Electrical and Electronics Engineering (NCCEEE) on 23<sup>rd</sup> and 24<sup>th</sup> April, 2016 in association with IETE, Delhi. 96 papers, from various institutions and Industries all over India, including premier institutions like IITs, NITs, were presented during this conference. The Chief Guest for this function was Shri. Suresh Lok, Senior VP, Consulting Innovation and Evaluation for New age Services at International Innovation, Incubation and Training centre, Navi Mumbai. Ravindra Kale, Sr. Programme Manager, Tata Communication Ltd, Mumbai, Dr. Munir Sayyad, General Manager, Reliance Jio, Dr. B. B. Meshram, Professor, Computer Engineering VJTI, Mumbai were among other delegates. 10 plenary talks of distinguished academicians, professionals, industrialists and management thinkers were also organized at this event.

**Alumni Meet:** An alumni meet was organized by department on 24<sup>th</sup> April, 2016. 22 alumni from different batches attended the event. They shared their experience as well as interesting moments of campus life to the audience. They also shared their expectations from Department and how they can contribute for the development of the department. An interaction session was organized with alumni so that students get the proper guidance for the various opportunities after engineering, preparation for various exams like GATE, GRE, TOEFL, and research opportunities. After a discussion, it was unanimously decided to establish an Alumni Constitution, a team of alumni and faculty to keep in track with schemes they might undertake for the betterment of the department.

**QEEE Programme:** University is participating in QEEE programme of MHRD for receiving live interactive classes from IIT Madras under TEQIP-II. We have selected 3 theory courses, 3 virtual labs and 5 vocational augmentation courses under this programme. Dr. S.L. Nalbalwar and Dr. M. S. Tandale are working as System Administrator and Co-ordinator respectively for this programme.

**The Video Lectures prepared by IIT faculty from NPTEL** videos are regularly shown to the students for enhancing their understanding and performance in the core subjects of the course. Course content of the curriculum for most of the subjects are taken from NPTEL pool.

**GATE coaching:** Remotely situated institutes like ours must conduct practices beneficial to students during final year of graduation. Department conducts, throughout the year, the GATE coaching classes for all the students till their examination and these classes are included in their weekly time table as if they are the part their academic schedule. Every year almost all students of the final year B.Tech. are appearing for the examination. This year about 31 students have cleared GATE -2016 examination.

**Industrial Training:** Each student undergoes an industrial training during summer vacation at the end of 2nd year B.Tech. for 2-weeks and 3rd year B.Tech. for 4 weeks. This training gives exposure to the students to latest industrial practices and modern technologies, develops interest of core subjects among students; which would in turn help them to identify research-oriented projects.

**Technical Project related to Community Services:** Students undertake projects related to community services. Through such projects, they get exposure to real life problems of the community. This gives them an opportunity to seek solutions to such problems. Initially group of students visit the nearby places surrounding the University and discuss about various issues that community is facing in their day to day activities. Thereby identifying the problems through the discussions and observations, students suggest the various possible solutions and develop prototype to fulfill their requirements.

**Open Book Examination:** Department started open book examination for some of the B.Tech / M.Tech courses. Purpose behind this is to improve conceptual understanding and thinking ability rather than memorizing ability. It is ideally suited to teaching programs that especially aim at developing the skills of critical and creative thinking. A

more important reason for using open book examinations is that they have a tremendous impact on promoting the right mental sets in both learning and teaching.

**Industrial Visits:** Department motivates students to participate in industrial visits. This opportunity makes the student to fill the gap between the current trends and course curriculum. Following industrial visits were arranged for B. Tech and M. Tech students in this year.

## 20. IETE CYNOSURE NCCEEE 2016 Conference



**IETE CYNOSURE, NCCEEE-2016 (from left to right) Dr. S. L. Nalbalwar, Dr. Milind Shah, Shri. Suresh Lok, Prof. V. G. Gaikar, Dr. M. A. Dabhade, Prof. S. B. Deosarkar, Dr. B. B. Meshram**

The two - day National Conference IETE Cynosure-2016 (NCCEEE 2016) was organized in University by the Department of Electronics and Telecommunication Engineering on 23<sup>rd</sup> and 24<sup>th</sup> April 2016 in association with IETE, Delhi. The inaugural function was attended by Prof. V.G. Gaikar, Hon. Vice-Chancellor, Shri. Suresh Lok, Senior VP, Consulting Innovation and Evaluation for New Age Services at International Innovation, Incubation and Training centre, Navi Mumbai, Dr. S.B. Deosarkar, Professor, Department Electronics & Telecommunication, Dr. B. B. Meshram, Professor, Computer Engineering VJTI, Mumbai, Dr. B.A.T.U., Dr. S. L. Nalbalwar, Head, Department Electronics & Telecommunication, Dr. B.A.T.U., Dr. M. A. Dabhade, Principal, IOPE, Lonere, Ravindra Kale, Sr. Programme Manager, Tata Communication Ltd, Mumbai, Dr. Munir Sayyad, General Manager, Reliance JIO, wherein the Chief Guest for this function, Shri. Suresh Lok delivered Key note address on “Recent Developments in Telecommunication and Future Trends”, at inaugural function.

About 10 plenary talks of distinguished academicians, professionals, industrialists and management thinkers were also organized at this event in such a way that every delegate will have opportunity to attend each session. During inauguration, in his welcome speech, Dr. S. L. Nalbalwar invited all the participants to express themselves and share their views and experience in this symposium. He convinced that this conference would engage all the participants in information sharing, to promote intellectual interaction and provide food for thoughts. Dr. V. G. Gaikar shared his learned opinion on need for interdisciplinary collaboration to invent and innovate. He emphasized on the use of technology for betterment of society and nation. He assured all the help for new innovations to convert the academics into consumer technology. At the end of the inaugural function Prof. S.V. Khobragade has proposed the vote of thanks to all who were directly or indirectly involved with the function.

Around 150 technical papers were received from various institutions and industries all over the nation, including premier institutions like IITs, NITs. Double blind review system was used for review process, 96 papers were finalized for Oral Presentation.

After successful conduction of all the sessions on 24<sup>th</sup> April, 2016, the valedictory function started with felicitation of invited dignitary Dr. D. V. Kotawade. Prof. S. V. Khobragade presented the conference report which was followed by the views about the overall conduction of conference, by dignitary. After that 15 “Young Researchers Awards” were distributed among the session winners. Dr. S. L. Nalbalwar delivered his vote of thanks to all the dignitaries, organizers, sponsors, committee members and participants of the Conference. After that the valedictory function ended with National Anthem.

## 21. Alumni Meet



An alumni meet was organized by Department of Electronics & Telecommunication Engineering on 24<sup>th</sup> April, 2016. Event started when all alumni registered themselves, affirming their presence. Excited as they all were by their friends' mere presence, the mob immediately scurried away to have the glimpse of the campus they had dearly missed. After they all returned from their tour, they had been greeted by Dr. S. L. Nalbalwar and Prof. S. V. Khobragade.

Speaking on the occasion, Dr. S. L. Nalbalwar underlined and praised the achievements of Alumni in all walks of life. He felt that it was matter of great pride for University that its Alumni are holding positions of responsibility in various Government organizations, PSUs, Private sector, Academic Institutions. The Inaugural session was followed by cultural programme by our students. Some of the alumni shared their experience as well as interesting moments of campus life to the audience. They also shared their expectations from Department and how they can contribute for the development of the department.

An interaction was organized with alumni so that students get the proper guidance for the various opportunities after engineering, preparation for various exams like GATE, GRE, TOEFL, and research opportunities.

One of our beloved alumni Rahul Waghmare could not attend meet but he gifted one book for the department library.

After a discussion, it was unanimously decided to establish an Alumni Constitution, a team of alumni and faculty to keep in track with schemes they might undertake for the betterment of the department. On a concluding note, the alumni were presented with a small token of affection and souvenir.



## 22. Academic Achievements

### 22.1 Faculty Achievements

**Member of BoS:** Dr. S. L. Nalbalwar has been nominated as Member, Board of Studies in E & TC Engineering by University of Pune. Also nominated as member of Research Committee, VJTI, Mumbai.

**Avishkar – 2015:** Mr. S. V. Khobragade was selected in final round for 10<sup>th</sup> Maharashtra State Inter University Project Competition “Avishkar – 2015” in Engineering and Technology Teachers’ category for the project Design of Fractal Microstrip Antenna for Multiband Application, organized by Government of Maharashtra during 10 – 12 January, 2016 in Savitribai Phule University, Pune.

**CCTV Procurement:** Dr. S. L. Nalbalwar is appointed as Chairman by Raigad district Collector for Procurement of CCTV for various offices in the Raigad district.

**INAE Research Fellowship:** Dr. Brijesh Iyer has received the Indian National Academy of Engineers (INAE) Research Fellowship for the year 2015-2016.

### Citation index of faculty members and impact factor are as follows

S.N.	Name of the Faculty	Citation index	Impact factor
1	Dr. S. L. Nabalwar	152 (for 77 papers) h-index:7	2.07 (for 39 papers)
2	Prof. S.V. Khobragade	14 (for 32 papers) h-index:2	1.67 (for 13 papers)
3	Dr. A.B. Nandgaonkar	--	2.28 (for 6 papers)
4	Dr. Brijesh Iyer	22(15 papers), h-index-3	4.62 (for 3 SCI papers)

### 22.2 Distinguished alumni of the Department

**Pritesh Pawaskar** - Staff Engineer (Flash Chip Power Management), Flash Component Division, LSI Corp.

**Mahadu Kurkute** - Sr. Project Manager in Infosys

**Rajnish Telang** - Sr. Staff Engineer, Orca Radio Systems

**Mayur Desai** - Principal Engineer, Broadcom

**Anil Bajpai** - Practice Head, Infosys

**Preeti Chande** - Business Analyst, Capgemini

**Ranjit Khot** - Project Manager, KPIT

**Ranjit Somnathan** - Vice President, Credit Suisse

**Vijay Shepunde** - Manager, Capgemini

**Sourabh Bandopadhyay** - Manager, Industry Solution Group, Cisco Systems

**Mandar Patil** - Staff Verification Engineer, Infinera

**Shashank Nafde** - Associated Project Manager, HCL Technologies

**Anand Zambre** - Assistant Consultant, TCS

### 22.3 Major Students' Achievements

List of students qualified GATE 2016 examination is as follows:

S.N.	Name	Gate Marks	S.N.	Name	Gate Marks
1	Saurabh Wakshe	26.9	16	Raghav Despendande	30
2	Saurabh Karanglkar	34.76	17	Ramdas Khade	26
3	Mikhil Gupta	30.48	18	Kailash Khaire	22.06
4	Shital Tadshan	25.83	19	Vaibhav Gaikwad	29
5	Ashwini Wagh	19.03	20	Purnima Kalekar	30
6	Tirupati Hendge	37.27	21	Yogesh Jadhav	34
7	Pramod Borkar	27.29	22	Ashish Khobragade	34
8	Gaurav Gaikwad	25.26	23	Gopisingh Naik	28
9	Vinay Ghanvant	25.74	24	Riyaz Shaikh	29
10	Dnyaneshwar Gavhane	25.29	25	Megha Sonawane	28
11	Dipak Aher	24.37	26	Aditya Pawar	29
12	Kiran Kurankar	18.80	27	Sumit Rai	34
13	Ashish Shendre	31.3	28	Swapnesh Shinde	25
14	Umesh Gharmade	25	29	Sarwesh Satpute	28.04
15	Nitin Gorode	32	30	Priyanka Govardhan	26.04

**Paper publication by the students:** Students publish their research papers regularly in national/ international conferences and journals. About 50 papers have been published by the students in the current academic year.

**GRE:** One student from final year B. Tech – Neha Thigole got 319 out of 340 in GRE.

### 23. Telecommunication and Engineering Students Association (TEESA)

TEESA is a purely student centric committee constituted as a part of personality development activity for the students of the department. The committee members are responsible for planning and smooth conduct of various technical and nontechnical activities for the students of the department

**TEESA committee for the academic year 2015-2016**

<b>Sr.</b>	<b>Name</b>	<b>Designation</b>	<b>Responsibility</b>
1.	Mr. Rishi Koul	President	Yearly student activity planning, control & execution, bridge between student & faculty advisor and HOD
2.	Mr. Kailas Kokare	Secretary	Maintenance of financial record of TESSA
3.	Mr. Yatish Jadhav	Social Activity Co-ordinator	Coordination and planning of social activities for the student in consultation with the President
4.	Mr. Rishikesh Munde	Student Counseling Cell Co-ordinator	Identification of the student who need the counseling on various issues in the campus and off the campus, coordinate faculty and student meeting for the counseling
5.	Mr. Vijay Jamdar Ms. Nilam Shilimkar	Cultural Activity Co-ordinator	Coordination and planning of cultural activities for the student in consultation with the President
6.	Mr. Ganesh Mane Mr. Rishikesh Khairkar	Sports Activity Co-ordinator	Coordination and planning of sports activities for the student in consultation with the President
7.	Mr. Abhijit Bhadre Ms. Priyanka Govardhan	Technical Activity Co-ordinator	Coordination and planning of Technical activities for the student in consultation with the President
8.	Mr. Abhijeet Maske Mr. Abhijeet Suryawanshi Mr. Onkar Shewalkar Mr. Gitesh Shewatkar Mr. Sanket Birajdar Mr. Onkar Phane	News Room Activity Co-ordinator	Updates of recent events, current news and progress in science and technology to the student via notice board. Preparation of quarterly news bulletins for the students
9.	CR of DIV-A CR of DIV-B	First Year Representative	Coordination of the class with TESSA activities via its committee members.
10.	Mr. Amol Rathod Mr. Vadant Kulkarni	Second Year Representative	
11.	Mr. Akash Warkhede Mr. Manoj Kokane	Third Year Representative	

**Abhiyanta Vasant 2016 (Literature/Cultural Events)**

Marathi debate:	Silver	Yatish Jadhav, Ramesh Koli
Marathi elocution:	Gold	Ramesh Koli
Hindi elocution:	Silver	Saurabh Suman
Poetry:	Gold	Ramesh Koli
Painting / Poster:	Gold	Saurabh Suman
Clay modeling:	Gold	Yugant Ambekar
Rangoli:	Silver	Akanksha Kagade
Spot photography:	Silver	Sarang Gaikhar
Ad-Mad:	Gold	Nilam Shilimkar, Rishi Kaul, Ramesh Koli, Vijay Jamdar, Yatish Jadhav
Group Dance	Gold	Harshali Bapat, Purna Kamat, Shradha Kamble, Supriya Kamble
Best Actor		Divya Yadav, Rajashree Khandekar
Best Actor in Skit		Ramesh Koli
Dance	Gold	Vijay Jamdar
Duet Dance	Silver	Asmita Kamble
Lavani	Silver	Samiksha Sorde, Shubhangi Nirbhawne
Singing	Gold	Shubhangi Nirbhawne
		Vikrant Kamble

**24. Technical Events by TEESA**

<b>Ignite (Cynosure 2k16)</b>	<b>MicroMouse (Cynosure 2k16)</b>	<b>Micro App (Cynosre 2k16)</b>
		

## **25. Departmental Strengths, Weaknesses, Opportunities and Challenges**

### **Major Strengths of the Department**

- Highly dedicated and motivated faculty members.
- The curriculum design is a perfect blend of Electronics, Communication and Computing Technologies.
- The Department regularly gets handful amount of funding from AICTE, UGC, and State Government by way of various research or other projects.
- Guidance and support from Alumni.
- Research publications by faculty members.
- Well equipped labs for UG, PG as well Research Scholars.

### **Weaknesses**

- Departmental maintenance, etc: Most of the minor problems related to maintenance & installation are handled in the department itself. These problems are solved with the help of laboratory assistant and Department students. For major problem such as repairing of PC motherboards, trainer kits, UPS controller, test and measurements equipment Department does not have maintenance & repair facility. Some of the equipment and PCs are obsolete hence are required to be replaced by new equipment.
- Lack of adequate space for laboratory and class room: The Department intake is of 120 students, it is difficult to manage classes, examination and practical, in the space allotted to the Department.
- Faculty shortage: Presently faculty strength of the Department is seven (01+01+05). As per the norm, faculty strength of the Department should be equal to 35. However, Department activities are carried out by appointing faculty on contract basis and also by appointing teaching assistants.

### **Opportunities**

- The budding graduates from this discipline have very good job opportunities in VLSI Technologies, Embedded Systems, Signal Processing, Radio Frequency (RF) Communication, Mobile communication and in Software Engineering.
- Every year many of our students getting placement in reputed industries like Infosys, TCS, Cognizant, Persistent, Siemens, Huawei, Reliance Communication, Videocon, BHEL, BEL, GE, L & T, Sasken, MBT, Texas, Accenture, Motorola, Flextronics, NVIDIA, Tataelxsi, BSE etc.

### **Challenges**

- Managing all Departmental activities with the help of available faculty members.
- Recruitment of qualified faculty members having Ph.D. qualifications.
- Attracting creamy students for UG, PG and Ph.D. programmes.

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## **Department of Information Technology**



**Dr. S. M. Jadhav**  
**Associate Professor and Head**

### **Message from Head of the Department**

It gives me immense pleasure to present the annual report of the Department of Information Technology for the year 2015-16. Department is striving hard towards the goal of providing innovative and quality education with high standard to achieve academic excellence. The very motto of our department is to provide quality and technology-

based education. The process of learning is extremely important in life. What you learn, how you learn and where you learn play a crucial role in developing ones intellectual capability, besides career. Department is involved in organizing training programmes and workshops on awareness of free and open source systems and recent software tools and technologies.

Dr. S. M. Jadhav

## 1. Vision and Mission Statements of the Department

### Vision

Impart highest quality, technology-based education, in the most cost-effective manner, to facilitate the University mission as it applies to the management, teaching, learning, and community service.

### Mission

Provide effective technology support for audio/visual, computer, multimedia, voice, video, and web-based applications to fulfill the need of students and staff. Promote and facilitate the effective integration of technology into the basic mission of the University through planning, programming, training, consulting, and other support activities. Develop, enhance, and manage the University enterprise networks to provide high speed, transparent and highly functional connectivity among all information resources. Develop and maintain highly effective, reliable, secure, and innovative information systems to support instructional, administrative and research activities. Facilitate the collection, storage, security and integrity of electronic data while ensuring appropriate access, innovative applications.

## 2. About the Department

The department of Information Technology was established in the year 2001 with B. Tech. program having intake of 60 students under the umbrella of Department of Computer Engineering. The B. Tech. programme in Information Technology was shifted to the newly created department in 2004. The first research scholar for Ph.D. programme enrolled in the department in 2015. Department has seven regular faculty, three laboratory supporting staff-Laboratory Assistant Technical, Laboratory Assistant and Laboratory Attendant. All the faculty members have completed their M.E. /M.Tech. One faculty has completed Ph.D. and two faculty members are pursuing their PhDs. The Department has set tradition of achievements in sports, cultural activities, extracurricular activities, competitive examinations like GATE, MBA-CET etc. and campus placements.

## 3. Programme Educational Objectives (PEOs) & Programme Outcomes (POs)

A graduate in the discipline of Information Technology is generally expected to have three kinds of knowledge. First, the graduate should have conceptual knowledge of the core topics of Information Technology and Computer Science. Second, He/she should have knowledge of mathematical formalisms underlying various programming concepts. Third, graduates in the discipline of Information Technology should have the knowledge of the state of the art technologies and tools so that he/she can apply the principles of Information Technology and Computer Science to solve real-life problems from diverse application domains. B.Tech. in Information Technology programme at Dr. Babasaheb Ambedkar Technological University (DBATU) essentially aims to meet these broad expectations. At the same time, the programme intends to comply with the courses and syllabi available at National Programme on Technology Enhanced Learning (NPTEL). Following specific educational objectives aim to achieve these global and regional expectations.

Objective Identifier	Objectives
PEO1	To provide knowledge of sound mathematical principles underlying various programming concepts.
PEO2	To develop an ability to understand complex issues in the analysis, design, implementation and operation of information systems.
PEO3	To provide knowledge of mechanisms for building large-scale computer-based systems.
PEO4	To develop an ability to provide computer-based solutions to the problems from other disciplines of science and engineering.
PEO5	To impart skills necessary for adapting rapid changes taking place in the field of information and communication technologies.
PEO6	To provide knowledge of ethical issues arising due to deployment of information and communication technologies in the society on large scale.

Students of B. Tech. (Information Technology) at DBATU will have an ability to build information systems and provide computer based solutions to real life problems after undergoing the learning process of four years. The graduates of this programme will demonstrate following abilities and skill sets.

<b>Outcome Identifier</b>	<b>Outcomes</b>
<b>PO1</b>	The graduates will possess the knowledge of various discrete mathematical structures and numerical techniques.
<b>PO2</b>	The graduate will demonstrate the use of Logic in representing and reasoning knowledge based systems.
<b>PO3</b>	The graduates will have an ability to apply mathematical formalisms of Finite Automata and Probability in modeling and analysis of systems.
<b>PO4</b>	The graduates will have knowledge of programming languages and concepts essential to implement software based system.
<b>PO5</b>	The graduates will have an ability to analyze problem, specify algorithmic solutions to them and to evaluate alternative solutions.
<b>PO6</b>	The graduates will have in-depth knowledge of core programming paradigms such as database orientation, object orientation.
<b>PO7</b>	The graduate will have understanding of the impact of a IT based solutions in economic, environmental and social context.
<b>PO8</b>	The graduates will demonstrate use of analytical tools in gathering requirements and distilling relevant information to provide IT based solutions.
<b>PO9</b>	The graduates will have knowledge of design rules and patterns necessary to formulate computer based solutions.
<b>PO10</b>	The graduates will demonstrate the ability to build human centric interfaces to computers.
<b>PO11</b>	The graduates will possess the knowledge of advanced and emerging topics in the fields of operating systems, databases and computer networks.
<b>PO12</b>	The graduates will posses skills necessary to communicate engineering ideas. The skills set include verbal, written and listening skills.
<b>PO13</b>	The graduates will understand ethical issues in providing IT based solutions also they will have an ability and attitude to address the ethical issues.
<b>PO14</b>	The graduates will demonstrate the ability to work and collaborate in heterogeneous teams.
<b>PO15</b>	The graduates will understand the role of system software such as operating systems, database management systems, web technologies, compilers, middleware and internet protocols in realizing distributed information environment

#### 4. Overview of Academic Programmes

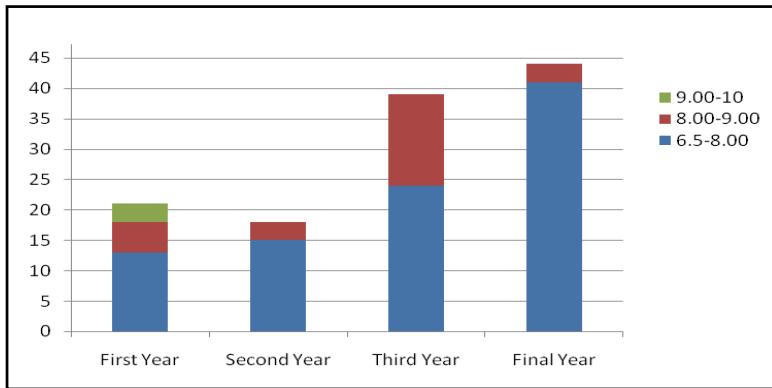
<b>Academic Programme</b>	<b>Duration</b>	<b>Intake</b>
B. Tech. in Information Technology	Four Years	60

##### 4.1 UG Students Statistical Information

<b>S.N.</b>	<b>Category</b>	<b>Second year</b>	<b>Third year</b>	<b>Final year</b>	<b>Total</b>
1	SC	10	10	9	29
2	ST	4	4	5	13
3	OBC	25	20	21	66
4	OPEN	25	28	32	85
5	SBC	0	5	2	07
6	VJNT	7	8	10	25
7	J & K	1	0	0	1
<b>Total</b>		<b>72</b>	<b>75</b>	<b>79</b>	<b>226</b>

<b>S.N.</b>	<b>Sex</b>	<b>Year</b>			<b>Total</b>
		<b>Second Year</b>	<b>Third year</b>	<b>Final year</b>	
1	Male	38	41	46	125
2	Female	34	34	33	101
<b>Total</b>		<b>72</b>	<b>75</b>	<b>79</b>	<b>226</b>

## 4.2 Result Analysis



## 4.3 Placement

Details of students placed during year (2015-16)

S.N.	Name of Student	Name of Company
1	Mr. Vaibhav Inamdar	L &T InfoTech
2	Ms. Snehal Kashetti	
3	Ms. Akshada Salunke	
4	Ms. Madhura Kanetkar	
5	Mr. Akashay Bhausaheb Lawate	Shatkone Pvt. Ltd., Pune
6	Mr. Ajinkya Narayan Muthal	CA Technology , Mumbai
7	Mr. Alokumar Vinod Mishra	Dimension NXG ,Mumbai
8	Ms. Kavita Patil	Optinno Mobitech Pvt. Ltd.

## 5. Faculty and Staff

### 5.1 Regular Faculty



**Dr. Jadhav Shivajirao**  
**Manikrao** B. E. (CSE), S. G. G.  
 S. Institute of Engg. &  
 Technology, Nanded,  
 M. E. (CE), V.J.T.I Matunga,  
 Mumbai  
 Ph.D., Dr.B.A.T.U, Lonere  
**Honors and Award:** Received  
 UGC's Teacher Fellowship award  
 under FIP for Ph.D. Study

**Research Interests:**

- Soft Computing and Machine Learning, Hybrid Neural Networks
- Biomedical Signal Analysis

23 years of Experience



**Prof. Sutar Sanjay Raghunath**  
 B. E. (CE), Walchand College of  
 Engineering, Sangli,  
 M. Tech. (CE), Dr. B.A.T.U.,  
 Lonere.  
 Ph. D. (Pursuing) S. G. G. S.  
 Institute of Engineering &  
 Technology, Nanded  
**Research Interests:**

- Scheduling
- Evolutionary Algorithms

20 years of Experience



**Prof. Kadam Vinod Jagannath**  
 B.E.(I.T.) Shivaji University,  
 Kolhapur  
 M.Tech. (CE), Dr. B.A.T.U.,  
 Lonere.  
**Research Interests:**

- Data Mining
- Machine Learning

11 years of Experience



**Prof. Babhulgaonkar Arun R.**  
 B. E. (CSE), Dr. B. A.M.U.  
 Aurangabad  
 M. Tech. (CE), DBATU, Lonere.  
 Ph. D. (Pursuing) Walchand  
 College of Engineering, Sangli.  
**Research Interests:**

- Natural Language Processing
- Compiler Construction

13 years of Experience



**Prof. Bharad Sonali Vasudeorao**  
B. E. (IT), Dr. B. A. Marathwada University-Aurangabad  
M. Tech. (CE), Dr. B.A.T.U., Lonere  
**Research Interests:** Natural Language processing  
09 years of Experience



**Prof. Hivre Sadhana Ranojirao**  
B. E. (IT), Terana Public Charitable Trust's COE, Osmanabad,  
Dr. B.A.M.U., Aurangabad.  
M. Tech. (CE), DBATU, Lonere  
**Research Interests:** Software Engineering  
09 years of Experience



**Prof. Barphe Sapana Shivaji**  
B.E.(I.T.), Annasaheb Dange CoE and T, Ashta - Sangli,  
M.Tech. (C.E.), Dr. B.A.T.U., Lonere  
**Research Interests:** Software Engineering Software Testing  
09 years of Experience



**Ad-hoc Faculty**  
**Mrs. Gaikwad Bhakti Nilesh**  
B. Tech (IT), Dr. B.A.T.U., Lonere  
M. Tech. (CSE) RCERT, Chandrapur.  
**Research Interests:** Information Security  
03 Years of Experience

## 5.2 Staff Profile



**Mr. Prashant P. Pendhari**  
**Designation:-** Laboratory Assistant Technical  
**Qualification:-** Diploma in Computer Hardware and networking Technologies, Computer Hardware maintenance and networking



**Mr. Apekshit K. Patil**  
**Designation:-** Laboratory Assistant  
**Qualification:-** Diploma in Mechanical Engineering



**Mr. Ravindra B. Hatkar**  
**Designation:** Laboratory Attendant

## 6. Responsibilities to Faculty

### 1. Dr. Jadhav Shivajirao Manikrao

1. Head, Department of Information Technology
2. Convener, EduSat (AICTE Setup)
3. Member, Academic Council, Dr. B.A.T.U. Lonere
4. Chairman, Board of Studies, Department of Information Technology
5. TEQIP MIS (Team Member)
6. Co-ordinator, Oracle Workforce Development Programme of Oracle University
7. Co-ordinator, Training to University Student, Faculty & Staff on Free and Open Source Software (FOSS)
8. Co-ordinator, Microsoft Usage Audit
9. Co-ordinator, Software Development through student's academic projects for University Use

### 2. Sutar Sanjay Raghunath

1. Co-ordinator, RailTel Internet Facility
2. Co-ordinator, TEQIP Institutional Reforms Committee
3. Member, Board of Studies, Department of Information Technology
4. Co-ordinator, Choice Based Elective Allotment

### 3. Kadam Vinod Jagannath

1. Co-ordinator, DTE Admission Reporting Center 3033
2. Co-ordinator, DTE Facilitation Center 3033
3. University (Institute level) admission coordinator (I year B.Tech. / Direct II B.Tech. / I Year M.Tech.)
4. Member, TEQIP Institute Industry Interaction Committee
5. Member, Board of Studies, Department of Information Technology

4. Babhulgaonkar Arun Ramrao
  1. TEQIP MIS (Dept. Co-ordinator)
  2. Co-ordinator, FIT
  3. Student Career Guidance and Counseling.
5. Bharad Sonali Vasudeorao
  1. Rector (Hostel Malayagiri)
  2. Departmental Meeting Secretary
6. Barphe Sapana Shivaji
  1. Rector (Hostel Dhavalgiri)
  2. Co-ordinator, TPCS and Industrial Training
  3. Member, Women Grievance cell
7. Hivre Sadhana Ranojirao
  1. Cynosure Technical Event Committee, member
  2. Annual Report Committee, member
  3. University Alumini Database Cell, member
  4. Departmental Project and Seminar coordinator
  5. Departmental Time table coordinator

## **7. Board of Studies**

S.N.	Name	
1	Dr. S. M. Jadhav, Head, Department of Information Technology	Chairman
2	Prof. Y. N. Patil, Institute of Petrochemical Engineering, Lonere- Raigad	Member
3	Mr. Sanjay Gandhi, Jetking India, Pune.	Expert
4	Prof. S. R. Sutar, Department of Information Technology	Co-opted Member
5	Prof. V. J. Kadam, Department of Information Technology	Co-opted Member

## **8. Research and Publications**

- [1] Prof. Vinod J. Kadam, Mr. Sanket N. Yerekar, "Face Recognition Based Automated Students Attendance and Reporting System", International Journal of Recent Advances in Engineering and Technology (IJRAET) December 2015.
- [2] Prof. Vinod J. Kadam, Mr. Shriraj N. Joshi, "Cloud Computing and Its Service Providers", International Journal of Recent Advances in Engineering and Technology (IJRAET) December 2015.
- [3] Prof. Vinod J. Kadam, Mr. Avinash D. Tayade, "Android Based Intelligent House Door Lock Security System", International Journal of Recent Advances in Engineering and Technology (IJRAET) December 2015.
- [4] Prof. Vinod J. Kadam, Ms. Prajakta S. Patil, "Face Recognition Approaches-Revisited", International Journal of Recent Advances in Engineering and Technology (IJRAET) December 2015.

## **9. Laboratory**

### **Laboratory Expenditure**

S.N.	Name	Qty.	Total Cost
1	Multi-media projector with wireless connectivity between PC & Projector “: Model No. PJWX2240 with WPS dongle. Resolution: 1280 x 800 W XGA,ANSI Lumen: 3000	02	82508.00

## **10. Projects**

### **10.1 Major UG Projects**

S.N.	Project Topic
1	College Ranking System
2	Network Based Modeling and Intelligent data mining of Social Media for improving care
3	CHATBOOK
4	Latur Municipal Website

5	Automatic Timetable Generator
6	Property Manage
7	Security in Online Data Storage
8	Import Export Portal
9	IT Ticket Login System
10	Computer Lab Management

11	Offline Digital Library	20	Online Shopping Cart
12	A Location Based Reminder Application on Android Platform	21	Alumini Management System
13	Suspicious Object Detection	22	IQ Prediction
14	Information Extraction	23	Online Shopping
15	Machine Translation	24	English to Marathi Translation
16	Hand Gesture Recognition	25	Image Segregation System
17	Campus Management System	26	Student Unique Identification in University
18	Data Leakage Prevention	27	Lost articles and Letter Reconciliation system
19	CHARM	28	Document Mining

## 10.2 UG Community Projects

S.N.	Community Project Topic	12	Order Tracking System
1	Project Guide Allotment System	13	Telephone Billing System
2	Cake Shop Management System	14	Student Online Help System
3	NCC Website	15	Pharmacy Management System
4	Honda Car Models Shop Management System	16	School Management System
5	Bike Mania Website for Bike Shop	17	Warehouse Management System
6	Class Selection Registration System	18	Library Management System
7	Online Crime File Management	19	Aadhar Secure Travel Agency
8	Elective Allotment	20	Online Feedback System
9	Book-bank Management System/ Stegnography	21	Autoshop
10	Poly-house Desktop Publication	22	Automatic Railway Gate Controller
11	Gift Shop Management System	12	Order Tracking System

## 10.3 Projects Undertaken at University Level through Student's Projects

- e-Affiliation
- e-Attendance
- e-Store
- e-Governance
- Student Tracking System
- University Campus Map Navigator
- IT Department Website

## 11. Doctoral Programme

Ph.D. Student

S.N.	Name	Registration Number and Date	Broad area of research	Research Guide
1	Mr. Samir Shrihari Yadav	RRS20151101 12 Sept. 2015	Medical diagnosis using soft computing techniques	Dr. S. M. Jadhav

## 12. Workshops / Conferences attended by Faculty, Research Scholars and Students

S.N.	Title	Date	No. of participants
1	"Recent Trends in Energy Research", by Dept. of Chemical Engg. and Mechanical Engg. at Dr.B.A.T.U., Lonere.	7-11 Dec., 2015	03

2	"SCILAB & SCICOS (Open source alternative to MATALAB & SIMULINK): Learning by Doing" by Department of Electrical Engineering, Govt. College of Engineering, Karad.	17-28 May, 2016	02
3	"Migration to open source platform" by IT department, Dr. Babasaheb Ambedkar Technological University, Lonere.	31 <sup>st</sup> October, 2015	07
4	"Recent Trends in Cyber Security", by Department of IT, MMCOE, Pune.	14-18 Dec., 2015	02
5	Two days workshop on Introduction to Robotics, conducted by IIT, Bombay.	18-19 January, 2016	01
6	Research Symposium-3, SGGS Institute of Engg. and Technology, Nanded.	25-26 July, 2016	01
7	Research Symposium-4, SGGS Institute of Engg. and Technology, Nanded.	12-13 March, 2016	01
8	International Conference on Recent Trends in Tech, Science and Engg., Amravati.	29 December, 2015	04

### 13. Trainings and Workshops Conducted under TEQIP-II

S.N.	Name of the Course	Duration	Name of the Co-ordinator	Eminent Speaker
1	Migration to open source platform	1 day	Dr. S. M. Jadhav	Mr. Krishnakant Mane Research Scholar, IIT Bombay.
2	Migration to open source platform	2 days	Prof. V. J. Kadam	Mr. Krishnakant Mane Research Scholar, IIT Bombay.

### 14. Academic Achievements

#### 14.1 Gate-2016 Examination Qualified Students

S.N.	Name	Score
1	Ms. Akshada Dattatraya Salunkhe	26.4
2	Mr. Dnyaneshwar Hanmantppa Shetkar	26
3	Mr. Wasim Sheikh	304/330

### 15. Other Activities Conducted by Department:

**Industrial Training:** Each student undergoes an industrial training during summer vacation at the end of 3<sup>rd</sup> year B.Tech. for 4 weeks. This training gives exposure to the students to latest industrial practices and modern technologies, develops their interest of core subjects which would in turn help them to identify research-oriented projects.

**Technical Project related to Community Services:** Students undertake projects related to community services. Through such projects, they get exposure to real life problems of the community. This gives them an opportunity to seek solutions to such problems. Initially group of students visit places nearby the University and discuss about various issues that community is facing in their day to day activities. They identify the problems through the discussions and observations. Students suggest the various possible solutions and develop prototype model to fulfill their requirements.

### 16. Students Other Activities

#### 16.1 University Sports



## 16.2 Technical Events

(1) Googler: Event Heads1) Prashant Navatre2) Rukayya Kadiri

About the Event: The Second most Participated Event of CYNOSURE 2K16 tested skills to Google and abilities to use brain power in limited time period.

(2) Maze-Runner: Event Heads 1) Somesh Arewar 2) Shubham Didale

About the Event: The most participated event of CYNOSURE 2K16 gave a pure thrill and flavor of treasure hunt.



## 17. Industry Institute Interaction

### 17.1 MoU Signed by the Department

MoU with Oracle India Pvt. Ltd. for WDP membership

### 17.2 Industrial Visits

Department motivates students to participate in industrial visits. This opportunity makes the students to fill the gap between the current trends and course curriculum. Department organized an industrial visit to PSPL, Pune on 5<sup>th</sup> March, 2016 for T. Y. B. Tech. Students.



### 17.3 Awards won by Students:

Name	Awards
Miss. Manasi Ravindra Gawde	SILVER medal in Water Polo at 35 <sup>th</sup> National Games 2015, Kerala
	SILVER medal in Water Polo at 69 <sup>th</sup> National Aquatic Championship 2015, Rajkot
	2 Gold and 1 Silver in Swimming at National Level Inter-Engineering Sports Meet, SUMMIT'15 held at MIT, Pune
	7 GOLD in Swimming at National Level Inter-Engineering Sports Meet, ZEST'16 held at COEP , Pune
	Awarded RAIGAD BHUSHAN for achievements in Water polo at National & International Level.
	Best Swimmer Shield at National Level Inter-Engineering Sports Meet, ZEST'16 held at COEP , Pune

### 17.4 Faculty Achievements

- Dr. S. M. Jadhav, Associate Professor, has successfully completed PhD programme.
- Prof. A.R. Babhulgaonkar has been selected for PhD programme under QIP in WCE, Sangli.
- Ms. S. V. Bharad, Ms. S. S. Barphe and Ms. S. R. Hivre, Assistant Professors, have successfully completed M. Tech. Programme.

**18. Fraternity of Information Technology (Students Association)**  
**FIT Committee for the Academic Year 2015-2016**

S.N.	Name	Designation	Responsibility
1	Pratik Patil	President	Yearly students activity planning, control and execution
	Anil Rikshe		
2	Loveen Dwivedi	Cultural Activity	Coordination and planning of cultural activities for student
	Darshan Nelkar		
3	Akshay Mahadik	Sport Activity	Coordination and planning of sports activities
	Manasi Gawade		
4	Sanket Yerekar	Technical Activity	Coordination and planning of technical activities
	Amol Dait		
5	Chaitanya Khachane	Society Activity	Coordination and planning of activities for society
	Rajnish Nalawade		
6	Mandar Sakharkar	Literature Activity	Coordination and planning of literature activities
	Vinayak Sanap		
7	Aditya Khandate	Event Manager	Management of the various events

**19. Distinguished Alumni of the Department**



**Swapnil Dabhadde**

A software engineer by education, Swapnil is Co-founder and Business Head at The Horizon Technologies a Digital Agency based in Thane. Under his leadership, the company has registered impressive growth with more than 150 clients within 3 years from its inception and today is known as one of the fastest growing Digital Agency. Very passionate about his work, Swapnil also works as Social Media Strategist & Consultant for Start-up companies. With the vision of empowering educational institutes, Swapnil co-founded 360Track Systems on 23rd April 2016. He works as CMO of the company.

- **Devendra Chaudhari:** Aeronautical Engineer in Indian Air Force.
- **Aaditya Ogale:** Founder of Parshuram Technologies.
- **Anand Wathore :** Associate IT Consultant, ITC

**20. Departmental Strengths, Weaknesses, Opportunities and Challenges**

**Strengths:**

- Young and experienced faculty members
- Dedicated staff and faculty
- Campus wide networking

**Weaknesses:**

- Inadequate infrastructure
- Lack of Ph. D. qualified faculty
- Shortage of faculty
- Higher faculty positions are vacant

**Opportunities:**

- Starting PG courses
- Starting finishing schools
- Establishment of Departmental library
- Training for New Technology awareness
- Consultancy like cyber crime detection
- Enrollment of faculty for Higher studies

**Challenges:**

- Curriculum development as per industrial needs
- Dynamic nature of IT field
- Training of faculty
- Research facilities

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# **Department of Mechanical Engineering**



**Dr. P.K. Brahmankar**  
**Professor & Head**

## **Message from the Head of the Department**

**“The future belongs to those who prepare for it today.”**

It gives me immense pleasure to present the annual report of the Department of Mechanical Engineering for the year 2015-16. It is a matter of great pride that the Department has made consistent progress, year on year, in academic and co-curricular activities. The level of education offered by this Department is up-to-date and appropriate to the needs of the industry and profession.

Overall development of the individual is the goal of education and we all have to ensure that there is no stone left unturned to equip the student of today for the challenges of life. The Department, through state-of-the-art laboratories and conducive environment, facilitates learning and development of students. We provide our students opportunities to engage in experiments, design work, project work, industrial training, professional society activities and team work to enhance the learning process. Each of our faculty members is engaged in meaningful research and innovation by involving not only Ph.D./M.Tech students but also B.Tech students.

Our mission is to prepare our students to apply basic and advanced engineering knowledge and skills to the design, analysis and research of engineering systems; to prepare them to compete successfully in today's job market and for lifelong learning. In addition to good teachers, we also provide our students with an innovative and engaging curriculum. The holistic approach of the department stimulates innovation among students by inspiring fresh ideas with different perceptiveness, creative thinking and strong conviction to achieve true success. I take this opportunity to thank teaching as well as non-teaching staff and students, who are rendering their wholehearted support and co-operation to make the department a centre of excellence. I extend my best wishes to all the students in their chosen career path.

**Dr. P.K. Brahmankar**

## **1. Vision and Mission Statement of the Department**

### **Mission:**

Imparting quality education, looking after holistic development of students and conducting need-based research and extension.

### **Vision:**

The vision of the department is to achieve excellence in teaching, learning, research and transfer of technology and overall development of students.

## **2. About the Department**

Established in the year 1992, the Department of Mechanical Engineering offers following academic programs: (i) B.Tech.in Mechanical Engineering, (ii) M.Tech.in Manufacturing Engineering, (iii) M.Tech. in Thermal & Fluids Engineering and (iv) Ph.D. The department takes pride in its highly qualified and motivated faculty members most of whom are Ph.D.s from IITs. The alumni of the Department have made a mark in industry and profession. Over the years, the department has maintained good academic and research culture. As a result, the faculty members in the department have published more than 600 papers in peer-reviewed international journals and conferences so far. Further, some of the laboratories have developed innovative products which are being patented for commercial usage. The Department has strong linkages with institutes like IIT Bombay and BARC. In addition, the Department has also conducted several continuing education programs (CEPs) and STTPs for the benefit of faculty and industry personnel.

### 3. Programme Educational Objective (PEOs)

- ❖ To prepare students to excel in technical fields in order to pursue post-graduate programmes or to succeed in industry/technical profession, R&D institutions through global and new emerging areas in Mechanical Engineering.
- ❖ To provide students with solid foundation in scientific and engineering fundamentals required to solve engineering problems.
- ❖ To develop qualities like professional and ethical attitude, effective communication skills, leadership, teamwork skills, multi-disciplinary approach, and an ability to relate engineering issues to broader socio-economic context among students.
- ❖ To provide students conducive academic environment, awareness of excellence and the life-long learning needed for successful professional carrier.

### 4. Programme Outcomes (POs)

- ❖ The graduates will possess the knowledge of differential equations, vector calculus, complex variables, matrix theory, probability theory, physics, chemistry, and mechanical engineering.
- ❖ The graduate will demonstrate and ability to identify, formulae and solve Mechanical Engineering problems.
- ❖ The graduates will have ability to design, machine elements, analyze and interpret data.
- ❖ The graduates will possess the knowledge of advanced and emerging topics in the field of Mechanical Engineering.
- ❖ The graduate will demonstrate the skills to use modern tools, software & equipment to analyze and solve real life problems.
- ❖ The graduates will possess the communication skills necessary to communicate the engineering ideas. The skills set include verbal, written and listening skills.
- ❖ The graduate will demonstrate the ability to work and collaborate in heterogeneous teams.
- ❖ The graduate will demonstrate the awareness of professional and ethical responsibilities.
- ❖ The graduates will develop self confidence and ability for life-long learning.

### 5. Overview of Academic Programs

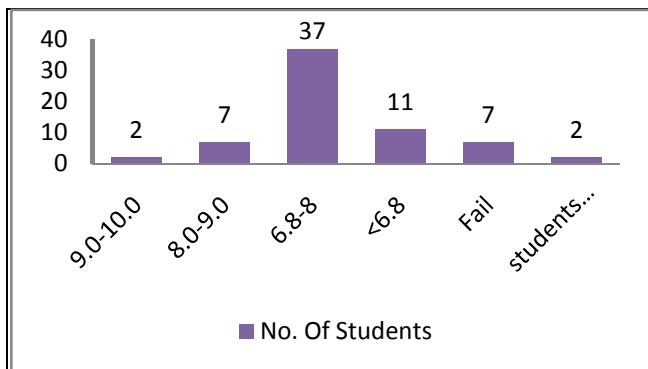
Academic Programme	Specialization	Duration	Intake
<b>Undergraduate</b>			
B. Tech.	Mechanical Engineering	Four Years	60
<b>Postgraduate</b>			
M. Tech.	Manufacturing Engineering	Two Years	18
M. Tech.	Thermal Engineering	Two Years	18
<b>Ph. D.</b>			
Ph. D.	Mechanical Engineering		33

#### 5.1 UG Students Statistical Information

Year	Open			SC			ST			OBC			VJNT			SBC			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
First	20	6	26	4	2	6	3	1	4	14	2	16	3	2	5	3	2	5	47	15	62
Second	22	4	26	7	3	10	5	1	6	22	10	32	6	1	7	0	0	0	62	19	81
Third	26	9	35	5	2	7	3	0	3	11	6	17	4	2	6	3	0	3	52	19	71
Fourth	22	10	32	5	1	6	4	1	5	11	4	15	4	3	7	1	0	1	47	19	66

#### 5.2 Result Analysis

<b>B.Tech. Pass Out Data(CGPA) 2015-16</b>	
<b>Pointer</b>	<b>No. of Students</b>
9.0-10.0	2
8.0-9.0	7
6.8-8	37
<6.8	11
Fail	7
Students with SGPA	2
<b>Total</b>	<b>66</b>



**Result Analysis of B. Tech. Final Year Mechanical Engg. (2015-16):**

### 5.3 Campus Placements

Following students from the department have got campus placement during academic year 2015-16.

S.N.	Roll No.	Name	Company
1	20120146	Manoj Patil	MaxVal Technologies Pvt. Ltd. Mumbai
2	20120115	Pooja Gole	Galaxy Roofing India Pvt. Ltd. Pune
3	20120135	Vaibhav Leharkar	Galaxy Roofing India Pvt. Ltd. Pune
4	20120115	Atmaram V Gaware	Galaxy Roofing India Pvt. Ltd. Pune
5	20120121	Shraddha Imandar	Kiroshkar Chillers
6	20120114	Mayur Gharat	Vighneshwari, Mumbai
7	20120136	Jagruti Mahamunkar	SARA HVAC
8	20120110	Lahu Dhigole	Vighneshwari, Mumbai
9	20120133	Ashwin Kolte	Vighneshwari, Mumbai
10	20130178	Vishal Potdar	Sudarshan Chemicals Ltd., Roha

### 6. Advisory Board of the Department

1. Professor S.K. Maiti (IIT Bombay)
2. Professor J.B. Doshi (IIT Bombay)
3. Professor A.W. Date (IIT Bombay)
4. Shri. R. Balaji (ONGC Mumbai)
5. Shri. Sanjay Chopane (Eaton India Engineering Centre, Pune)
6. Shri. Devidas D. Pawar (Bajaj Auto Ltd., Pune)
7. Shri. Ashok Agarwal (JSW Dolvi, Pen)

### Board of Studies (BoS as per Dr. BATU Act)

Section	Provision	Name of the Person
31(1)(a)	The Head of the University School of studies concerned	Not Applicable at present
31(1)(b)	The Head of the Department (ex-officio)	Dr. P.K. Brahmankar
31(1)(c)	One person who has specialized knowledge of the subject nominated by the Vice-Chancellor	Dr. M.S. Kale
31(1)(d)	Two technologists, to be co-opted by the Board from amongst the teachers who are not the Heads of the Departments	Dr. M.S. Tandale Dr. V.G. Sargade

### 7. Faculty and Staff Information



**Dr. P. K. Brahmankar**  
Professor and Head of Department  
B.E. (Mechanical Engg.)  
M.Tech (Production Engg.)  
Ph.D. (Mechanical Engg.)



**Dr. M. S. Tandale**  
Professor  
B.E. (Mechanical Engg.)  
M.Tech. (Mechanical Engg.)  
Ph.D. (Mechanical Engg.)



**Dr. V.G. Sargade**  
Professor  
B. Tech. (Mechanical Engg.)  
M. Tech. (Mechanical Engg.)  
Ph. D. (Mechanical Engg.)



**Dr. M. Sadaiah**  
Associate Professor  
B.Tech (Mechanical Engg.)  
M.E. (Production Engg.)  
Ph.D. (Manufacturing Engg.)



**Dr. R. P. Kate**  
Associate Professor  
B. E. (Mechanical Engg.)  
M. Tech. (Energy Systems  
Engg.)  
Ph.D. (Mechanical Engg.)



**Dr. N. Agrawal**  
Associate Professor  
B. E. (Mechanical Engg.)  
M. Tech. (Ref. & AC, Mech.  
Engg.)  
Ph.D. (Mechanical Engg.)



**Dr. R. S. Pawade**  
Associate Professor  
B. E. (Mechanical Engg.)  
M. E. (Machine Tool Engg.)  
Ph.D. (Mechanical Engg.)



**Dr. H. N. Warhatkar**  
Associate Professor  
B. E. (Mechanical Engg.)  
M. Tech. (Mechanical Engg.)  
Ph. D. (Mechanical Engg.)



**Dr. S. S. Naik**  
Associate Professor  
B. E. (Mechanical Engg.)  
M. Tech. (Mechanical Engg.)  
Ph. D. (Mechanical Engg.)



**Dr. B. F. Jogi**  
Associate Professor  
B.E. (Mechanical Engg.)  
M. Tech. (Manufacturing  
Technology)  
Ph.D. (Nano Materials)



**Dr. H. S. Joshi**  
Assistant Professor  
B.E. Production Engg.  
M.E. Mechanical-CAD/CAM  
Ph.D. Mechanical Engg.



**Prof. G. S. Warkhade**  
Assistant Professor  
B.Tech. (Mechanical Engg.)  
M.Tech. (Thermal and Fluids  
Engg.)  
Ph. D. ongoing (Mechanical  
Engg.)



**Prof. D. B. Waghmare**  
Assistant Professor  
B. E. (Mechanical Engg.)  
M. E. (Mechanical - Production  
Engg.)  
Ph. D. Ongoing (Mech. Engg.)



**Prof. S. R. Dhale**  
Assistant Professor  
B. E. (Mechanical Engg.)  
M. E. (Design Engg.)  
Ph.D. Ongoing (Manufacturing  
Engg.)



**Mrs. Rupali Sheth**  
Assistant Professor  
M. Tech (Manufacturing Engg.)  
Contract faculty



**Mr. Akash Awale**  
Assistant Professor  
M. Tech (Production Engg.)  
Contract faculty

### **Technical Supporting Staff**



**A. B. Choudhari**  
Lab Technician  
SSC, NCTVT (Chemical), B.A.  
Experience: 26 years.  
In Dept.: 8 years



**S. G. Lad**  
Lab Technician  
B.Sc. (Chemistry)  
Experience: 23 years.  
In Dept.: 8 years



**Manisha Umesh Sakate**  
Lab Assistant  
B.Sc.  
Experience: 7.6 years  
In Dept.: 1.5 years

### **8. List of Research Scholars**

S.N.	Name of Research Scholar	Registration Number	Title of Ph.D. Thesis
1	Saraf Atul R.	RS20120114	Some Studies on the Effect of Process Parameters on Photochemical Machining of SS316L.
2	Kadam Ganesh S.	RS20120111	Investigations on surface integrity in High-speed machining of Inconel 718 under different machining environments.
3	Patil D. H.	RS20120113	Photochemical Machining of Monel.
4	Chavan Ajay A.	RS20120109	Hard Turning using Coated Carbide Tools.
5	Nipanikar Suresh R.	RS20120112	Machinability Studies of Ti6Al4VELI in Dry and Minimum Quantity Lubrication (MQL) Environment.
6	Malvade Niket V.	RS20140112	Surface Integrity Analysis and Modeling in Machining of Biomedical Magnesium alloy.
7	Shinde Babasaheb D.	RS20140113	Machinability Assessment of Low Electrical Conductivity Ceramics by using WEDM.
8	Khadtare Avinash N.	RS20140108	Experimental Investigation and Modeling in Microdrilling of TBC Inconel 718 superalloy.
9	Thorat Shrikant B.	RS20140115	Some Investigations in Photochemical Machining of Cobalt Chromium Alloy.
10	Kadam Shirish V.	RS20140117	Some Investigations on Machinability of SAF2205 and SAF2507 Duplex Steel in End Milling.
11	Madavi Kishor R.	RS20140110	Optimization of Welding process parameters.
12	Lohar Ganesh S.	RS20140109	Structure Property Relationship Studies on Polymer Nano-Composite.
13	Jadhav Vijay D.	RS20140107	Some Studies on Reverse Electric Discharge Machining of Low Aspect Ratio Surface Area Structures.
14	Mahajan Kuldeep A.	RS20140111	Some Studies on Effect of Vibrations on Diamond Turning Performance.
15	Sonawane Gaurav D.	RS20140114	Machinability Studies of Difficult to Cut Materials Using Coated Tools with Advanced Coating Materials & Techniques.
16	Bhanavase V. L.	RS20140106	Study of Tribological Behaviour of Polymer Composite.
17	Nirantar Shripad R.	RS20150103	Preparation and Characterization of Polymer Based Nano Composite.
18	Varier Ranjith S.	RS20150104	Study of Machining Behaviour of Polymer Based Composite.
19	Bhise Vishal Y.	RS20150101	Sustainable Manufacturing: An Eco-Intelligent Design of Product System
20	Dhurde Ganesh P.	RS20150102	Some Studies on Surface Integrity of Component Produced by Electro-Discharge Machining
21	Misal Nitin D.	RS20090101	Some Investigation Into Photochemical Machining of Inconel Alloy
22	Pandey Akash B.	RS20090102	Some Investigation into Electrical Discharge Machining of Titanium Diboride Reinforced Steel Matrix Composites
23	Jagtap Ketan A	RS20120104	Investigation on Machined Surface Integrity in CNC Turning of Biocompatible Co-Cr-Mo Alloy

24	Patil Omprakash S.	RS20120117	Transcritical CO <sub>2</sub> Heat Pump System: Cycle Modification and Optimization
25	Jadhav Pravin L.	RS20120115	CO <sub>2</sub> Transcritical System: Studies on Capillary Tube
26	Jadhav Sangram D.	RS20120116	Investigation on Suitability of Alternative Fuel Obtained from Regional Feedstock for CI Engine
27	Vinod C Todkari	RS20120118	Investigations on Various Types of Hydraulic Jump
28	Vishwas V. Palwe	RS20140116	Some Investigation of Heat Pipe Heat Exchanger Assisted Air Conditioning System
29	Gujar R.A.	RS20140101	Some Investigations in Biomechanical Properties of Lower Extremity Bones
30	Pansare S. R.	RS20140102	Some Studies on Effect of Crack in Beam/Shaft
31	Patil S.R.	RS20140104	Some Studies on Investigation into Torsional Vibration Control using Smart Dynamic Damper
32	Wargante S.R.	RS20140105	Some Studies in Dynamic Analysis of Bones
33	Kadhane Somnath Hanumant	RS20120106	Some Investigation into Mechanical Behaviour of Soft Biological Tissues

## 9. Departmental Activities and Faculty Coordinators

S.N.	Faculty	ACTIVITIES/PORTFOLIOS
1	Dr. P.K. Brahmkar	Budget/Finance/Resource Mobilization
2	Dr. M.S. Tandale	Procurement of books/learning resources, library matters, space management
3	Dr. V.G. Sargade	No activity given due to additional charge of the post of Registrar.
4	Dr. M. Sadaiah	RC meetings/Ph.D. matters/R&D projects/ISO activity
5	Dr. R.P. Kate	Students Counseling / Teacher Guardian Scheme / Career Guidance to students
6	Dr. R.S. Pawade	Stake-holders' Feedback / Academic Audit
7	Dr. N. Agrawal	T&P / I-I-I / Dept Brochures / Web-site
8	Dr. H.N. Warhatkar	BTP/BTS/SSS/TPCS/Electives
9	Dr. S.S. Naik	Dept Meetings / Exam Section related matters / Remedial Coaching
10	Dr. B.F. Jogi	Coordination of NBA/NAAC activity / Admission activity
11	Dr. H.S. Joshi	Dept. Information, MIS, Cynosure, Avishkar, Techfests, MESA, Alumni affairs
12	Prof. S.R. Dhale	HR Activities/ Workload Distribution / TAs / Industrial Training of Students / Industrial Visits/Dept. Time-Table

## 10. Additional Responsibilities to the Faculty

### Dr. P.K. Brahmkar

- Head, Mechanical Engineering Department
- Co-ordinator TEQIP-II

**Dr. M.S. Tandale:** Co-ordinator QEEE

**Dr. V.G. Sargade:** In-charge Registrar of the University

**Dr. M. Sadaiah:** Associate Co-ordinator, TEQIP-II

**Dr. R.P. Kate:** Co-ordinator, Abiyanta Vasant (Annual Social (Annual Social Gathering)

### Dr. N. Agarwal

- Training and Placement Officer
- Co-ordinator, Industry-Institute Interaction Cell, TEQIP-II
- Faculty Advisor, M.Tech Program in Thermal and Fluids Engineering
- Faculty Advisor, ISHRAE Chapter

**Dr. H. N. Warhatkar:** NSS Co-ordinator

### Dr. S.S. Naik

- Co-ordinator, University Annual Report Committee
- Director, IQAC

**Prof. S. R. Dhale:** Rector, Sahyagiri Hostel

**Dr. R. S. Pawade**

- Co-ordinator- UGC Cell
- TEQIP II Procurement Co-ordinator
- Workshop Superintendent
- Faculty Advisor, M.Tech Program in Manufacturing Engineering
- Faculty Advisor- SAE Collegiate Club, Dr. BATU
- Member, Staff Promotion Development Scheme for Non-Teaching Staff
- In-charge for University Examination Seating arrangement
- In-charge for University Minibus
- In-charge for University Security

**Dr. B.F. Jogi:** Rector, Sahyagiri Hostel

**Dr. H.S. Joshi**

- Co-ordinator, University Timetable Committee
- Co-ordinator, University online Attendance system
- Co-ordinator, Technical Event Committee
- Chairman, University Alumni Cell

**Ms. Rupali Sheth****Mr. Aakash Awale**

- QEEE class coordination (department level)

## 11. Faculty Research and Publications (2015-16)

### 11.1 Journal Publications

- A.B. Pandey and P.K. Brahmankar, "A method to predict possibility of arcing in EDM of TiB<sub>2p</sub> reinforced ferrous matrix composites," International Journal of Advanced Manufacturing Technology, Published online in Feb. 2016, DOI 10.1007/s00170-16-8414-x.
- Nandkumar N. Bhopale, Suhas S. Joshi & Raju S. Pawade, Experimental Investigation into the Effect of Ball End Milling Parameters on Surface Integrity of Inconel 718, Journal of Materials Engineering and Performance, ASM International, 2015
- Nandkumar N. Bhopale, Raju S. Pawade, Effect of ball end milling parameters on surface and subsurface of Inconel 718, International Journal of Basic and Applied Sciences, Vol. 4, Issue 1, 2015, Impact Factor: 1.201
- Sunil Sanap, Sagar Sakharkar, Pankaj Sonawane, Raju Pawade, Multi-objective optimization of ball end milling of Inconel 718 using Utility concept, International Journal of Mechanical Engineering and Material Science, Vol. 8 (1), January-June 2015, pp. 27-33, ISSN: 0974-584X
- Ramesh Guttadar, Amit Patil, A. A. Jadhav, V. B. Satve, Raju Pawade, Design and Development of Horn and Slurry Circulation System in Ultrasonic Machining, International Journal For Technological Research In Engineering (IJTRE), Volume 2, Issue 7, March-2015, ISSN: 2347-4718
- Nandkumar N. Bhopale, Nilesh Nikam and Raju S. Pawade, Parameter Optimization of Ball End Milling Process on Inconel 718 Using RSM and TLBO Algorithm, Journal for Manufacturing Science and Production, DE GRUYTER, pp. 1-8, DOI 10.1515
- Nandkumar N. Bhopale, Nilesh Nikam and Raju S. Pawade, International Journal of Materials Forming and Machining Processes, 2(2), pp. 1-16, IGI Global, July-December 2015, DOI: 10.4018/IJMMP.2015070101
- Nandkumar Bhopale, Raju Pawade, Suhas Joshi, Surface quality analysis in ball end milling of Inconel 718 cantilevers by response surface methodology, Proceedings ImechE, Part B: Journal of Engineering Manufacture, 2015, pp. 1-13.
- Agrawal, N, Naik, S. S. and Gawale, Y.P., Vortex tube: An Alternative Cooling Solution. Cooling India, November 2015, 11(4), 34-56.
- Jogi B.F., Bhattacharyya Arup, Poyekar Amita, Poetschke Petra, Simon George, umar Satish, "The simultaneous addition of styrene maleic anhydride copolymer and multiwall carbon nanotubes during meltmixing on the morphology of binary blends of polyamide6 and acrylonitrile butadiene styrene copolymer" Polymer Engineering & Science, vol.55, Issue 2, 2015, pp. 457-465, DOI: 10.1002/pen.23905, 1.44 Impact Factor, Cited by 3.
- Bhagwan F. Jogi, Madan Kulkarni, P.K. Brahmankar, D. Ratna "Mechanical Properties of Rubber Toughened Epoxy/CTBN Matrix in presence of Carbon Nanotubes as Nanofillers" Journal of Applied Polymer Composites, 2015. (NIT Surathkhal)
- Jogi B.F., Bhattacharyya Arup, Poyekar Amita, Poetschke Petra, Simon George, umar Satish, "The simultaneous addition of styrene maleic anhydride copolymer and multiwall carbon nanotubes during meltmixing

on the morphology of binary blends of polyamide6 and acrylonitrile butadiene styrene copolymer" Polymer Engg. & Science, vol.55, Issue 2, 2015, pp. 457-465, DOI: 10.1002/pen.23905, 1.44 Impact Factor, Cited by 3.

### **11.2 National and International Conference Publications**

- Ganesh Dhurde, P. K. Brahmankar, R. S. Pawade, R. Balasubramaniam, Some studies on Diamond Turning of Aluminium alloy 6061-T 651, Proc. of International Conference on Precision, Meso, Micro and Nano Engineering, COPEN 9, Indian Institute of Technology, Powai, Mumbai, Dec. 9-12, 2015.
- Pankaj Sonawane, Raju S. Pawade, Suhas S. Joshi, Experimental analysis of Orthogonal Micromachined surface features of AISI 1215 steel by using EBSD method , Proc. of International Conference on Precision, Meso, Micro and Nano Engineering, COPEN 9, Indian Institute of Technology, Powai, Mumbai, Dec. 9-12, 2015.
- Sagar Sakarkar, Raju S. Pawade, P. K. Brahmankar, Nilesh Patil, Comparative machinability assessment in turning of Austempered Ductile Iron using MQL and Flood Environment, Proc. of International Conference on Precision, Meso, Micro and Nano Engineering, COPEN 9, Indian Institute of Technology, Powai, Mumbai, Dec. 9-12, 2015,
- Ketan Jagtap, Raju S. Pawade, On the influence of cutting forces in precision turning of Co-Cr-Mo Bio-implant alloy, Proc. of International Conference on Precision, Meso, Micro and Nano Engineering, COPEN 9, Indian Institute of Technology, Powai, Mumbai, Dec. 9-12, 2015
- Shraddha Rangari, Madhuri Choudhari, Mahesh Chavan, Raju S. Pawade, Vilas Shinde, Assessment of surface topography in Electro-phoretic Deposition assisted polishing of internal bore of AISI 304 steel , Proc. of International Conference on Precision, Meso, Micro and Nano Engineering, COPEN 9, Indian Institute of Technology, Powai, Mumbai, Dec. 9-12, 2015
- Sandeep Desai, Raju S. Pawade, Hemant Warhatakar, Experimental investigation in face milling of Mg-Ca 1 Biodegradable Alloy, Proc. of International Conference on Precision, Meso, Micro and Nano Engineering, COPEN 9, Indian Institute of Technology, Powai, Mumbai, Dec. 9-12, 2015
- Kiran More, Raju Pawade, Nilesh Nikam, Experimental investigation for improving Robotic Roller Hemming Process, Proc. of First International Conference on Productivity, Efficiency and Competitiveness in Design and Manufacturing, 7-9 January 2016.
- Kiran More, Raju Pawade, Some studies to optimize and improve the Robotic Roller Hemming process, Proc. of International Conference on Precision, Meso, Micro and Nano Engineering, COPEN 9, Indian Institute of Technology, Powai, Mumbai, Dec. 9-12, 2015, pp.
- Monika H. Salunkhe,Rashmi L. Lingapure, Sagar N. Sakharkar, Nikhil V. Khatekar, Raju S. Pawade, Electrophoretic Deposition Assisted Polishing of Internal Surfaceof AISI 304 Steel, Proc. of International Conference on Advances in Materials and Product Design (AMPD 2015), SV NIT, Surat, January 2015.
- Bhagwan F. Jogi, Madan Kulkarni, P.K. Brahmankar, Rinul Dhajekar and D. Ratna, Some Studies on the Mechanical Properties of Rubber Toughened Epoxy/CTBN Matrix in the Presence of Clay and Carbon Nanotubes as Nanofillers, International Conference on Nanostructured Polymeric Materials and Polymer Nanocomposites (ICNPM 2015), at International and Inter University Centre for Nanoscience and Nanotechnology (IUCNN), Mahatma Gandhi University, Kottayam, Kerala, India, during 13, 14 and 15 November 2015
- B.F. Jogi, N.S. Tupe, M.B. Todkar, R.S. Pawade and P.K. Brahmankar, Optimization of Metal Inert Gas Welding (MIG) Parameters using Design of Experiments (DoE); Proc. of The Third Intl. Conf. on Advances in Mechanical and Robotics Engineering - AMRE 2015 at Zurich, Switzerland, during 10-11 Oct, 2015, pp. 41-45, Copyright © Institute of Research Engineers and Doctors, USA. ISBN: 978-1-63248-066-8 doi: 10.15224/ 978-1-63248-066-8-98.
- Bhagwan F. Jogi, Monish Tarekar, Raju Pawade, Kiran More, P.K. Brahmankar, "Experimental Investigation on Analysis of Cutting Forces and Surface Roughness in Turning of PEEK Polymer" International Conference on Advances in Materials, Manufacturing and Applications, (Amma 2015) at National Institute of Technology Tiruchirappalli, Trichy, TN, India during 9th-11th, April, 2015, pp. 194-199. Paper ID: amma31, online available: <http://conference.bonfring.org/conferenceproceedings>. ISBN 978-93-84743-68-0 © 2015 Bonfring

### **12. List of Laboratories**

S.N.	Name of the Lab		
1	Refrigeration and Air Conditioning Lab	8	Photochemical Machining Lab (PCM)
2	Fluid Mechanics and Fluid Machinery Lab	9	Theory of Machines and Machine Dynamics Lab/ Engineering Mechanics Lab
3	Heat Transfer Lab	10	Machine Design Lab
4	Renewable Energy Lab	11	Metrology and Quality Control Lab
5	I.C. Engine / Thermal Engineering Lab	12	CAD / CAM Lab
6	Material Science / Engineering Metallurgy Lab	13	Robotics and Mechatronics Lab
7	Material Testing Lab (SOM)	14	Center for Advanced Machining Technology (CAMT)

## 12.1 Major Instruments in Laboratory

S.N	Name of Equipment/Instrument	Qty
1	Photoresist Coating Machine	1
2	MIG Welding Machine	1
3	ABACUS Software	1
4	Sample Hot Mounting Press	1
5	Steam Generation Device	1
6	Deep Freezer	1
7	Ultrasonic Cleaner	1
8	High Resolution PCM Printer	1
9	Pro- V- Building Anergy Software	1
10	ANSYS Academic Research CFD Package	1

11	MISTRAS Software	1
17	Workstations	3
18	Sample Polishing Machine	1
19	SAW Welding Machine	1
20	Biodiesel Production Setup	1
21	Baking Oven / Furnace	1
22	Ni Data Acquisition Systems	1
23	High Speed Camera	1
24	CAM Software With Workstation	1
25	Digital Storage Oscilloscope	1
26	Constant Temperature Bath	1
27	CATIA Software	1

## 13. Conferences/Workshops/Trainings/Academic Awareness activities conducted under TEQIP-II by Staff

S.N.	Name of the course/ Workshop/Conference	Duration	Name of coordinators	Eminent Speakers
1	Developments in Welding Technology	March 8-12, 2016	Dr. R.S. Pawade Dr. B.F. Jogi	Dr. Narendra Joshi Mr. Mangesh Patil
2	Robotisation in Automotive Industries	April 9, 2016	Dr. R. S. Pawade	Dr. S. S. Ohol, COE Pune
3	Advances in Precision Manufacturing	December 5, 2015	Dr. R. S. Pawade	Dr. Ramgopal V. Sarepaka, Sr. Vice President, Optics MechVac India Ltd.
4	Industrial Meet	March 19, 2016	All Faculty members	Three industry representatives and faculty were present
5	World Summit on Accreditation (WOSA2016) on "Quality Assurance through Outcome Based Accreditation"	March 18 to 20, 2016	Dr. N. Agrawal	Gurgaon, Delhi NCR
6	Day Workshop on Outcome Based Education jointly organized by BMS College of Engineering and IUCEE and Inpods	Jan. 09 - 10, 2016.	Dr. N. Agrawal	D.Y. Patil Institute of Engineering and Technology, Pimpri, Pune
7	Short Term Course on Condition Monitoring of Rotating Machine Elements at IIT, Indore on "Piping Engineering"	May 11-15, 2015	Dr. N. Agrawal	S.P. College of Engineering, Andheri, Mumbai

## 14. Industrial/Field Visits during 2015-2016

S.N.	Name of Industry/Organization	Date
1	Volkswagon Private Ltd.+ Chakan Science Center, Pune	18 <sup>th</sup> April 2015
2	JSW, Salav	22 <sup>nd</sup> April 2015
3	Nucluear Power Plant, Tarapur	22 <sup>nd</sup> April 2015
4	Techfest, IIT Bombay	26 <sup>th</sup> December 2015
5	Kisan Vir Sugar Factory, Satara (ISHRAC)	12 <sup>th</sup> February 2016
6.	Gharda Chemicals Ltd., Lote, Dist-Ratnagiri	10 <sup>th</sup> April 2016

## 15. Students' Achievements

### GATE 2016 Scores

S.N.	Name	Gate Marks
1	Akshay Joshi	49.35
2	Mayuresh Kange	38.79
3	Shivprasad Mawal	35.67
4	Aniket Gunjal	34.96
5	Manoj Patil	28.00
6	Vishal Wankhede	28.00

**16. Conferences/Workshops/Trainings/Academic Awareness activities conducted under TEQIP-II  
M. Tech and Ph.D. Student**

S.N.	Name of the course	Venue of the course	Duration	Name of attendee
1.	RESCON	IIT, Bombay	14-15 Mar. 2015	Avinash Khadtare
2.	Latex	IIT, Bombay	29 August 2015	Avinash Khadtare
3.	MAM 2015	VNIT, Nagpur	4-5 Dec 2015	Avinash Khadtare, Vishwanath Chavan, Suyog Gadhari.
4.	COPEN-9	IIT, Bombay	9 Dec, 2015	Avinash Khadtare
5.	Welding Technology DBATU, Lonere.	DBATU, Lonere	8-12 March, 2016	Avinash Khadtare, Rinul
6.	Optimization Techniques, IIT/DBATU	IIT Bombay, DBATU, Lonere	2- 7 Nov, 2015	Avinash Khadtare
7.	CEP Programme on 3D Printing (w/s)	IIT, Bombay	11-13 April, 2016	Amit Dalvi
8.	Materials Microstructure Characterization	IIT, Hyderabad	20-24 Dec, 2015	Vishwanath Chavan
9.	International Conf. on Nanostructural Polymeric Materials and Polymer Comp.	Mahatma Gandhi University, Kottayam, Kerala.	13-15 November, 2015	Rinul Dhajekar
10.	International Conference on Civil, Mechanical and Environmental Technology.	SVS College of Engineering, Coimbatore.	26-27 February, 2016	Rinul Dhajekar

**17. Technical Project on Community Services (TPCS)**



**Coconut Tree Climber**



**Liquid Fertilizer Spraying Machine**



**Two Way Manual Cutter**



**Venturi Stove**

**18. MESA Working Committee**

President:

Mayuresh Kange

Secretary:

Rohit Ghode

Treasurer:

Mayuresh Kambdi

Sport Secretary:

Krishna Rautwar

Faculty Advisor: Dr. H. S. Joshi



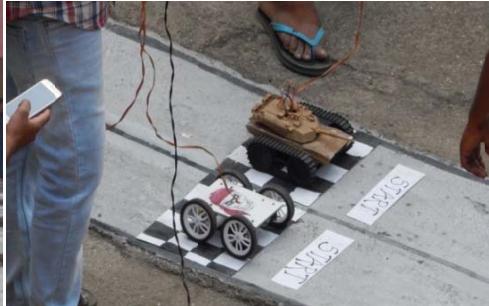
**Teachers' Day Celebration under MESA**



**Debate Competition under MESA**



**Organizing team of X'celerate (Cynosure 2k16)**



**Beginning of a race in Cynosure 2k16**



**Students enjoying the thrill of X'celerate**



**All terrain vehicle made by students of SAE Collegiate Club for SAE BAJA Competition**



**Students participating in SAE BAJA 2016**



**Team members and Faculty Advisor Dr. R.S. Pawade who participated in SAE BAJA Competition**

## 19. SAE Working Committee

President:

Ashwin Kolte

Vice President:

Monica Chavan

Treasurer:

Karansigh Rajput

Secretary:

Chaitali Sawant

Programme Chair:

Sayli Patil

Publicity Chair:

Mithilesh Rane

Reception:

Omkar Jadhav

Student Membership:

Govinda Amrutkar

Faculty Advisors:

Dr. R. S. Pawade & Dr. H. N. Warhatkar



**Students working hard to make the All-terrain vehicle for 'SAE BAJA Competition'**



**Launching Ceremony of vehicle made by 'SAE BAJA team of students'**

## **20. ISHRAE Working Committee**

President: Shirole Ranjeet Vilas  
Secretary: Chavan Mandar Prakash  
Treasurer: Mhamunkar Jagruti Chandrakant  
Faculty Advisor: Dr. Neeraj Agarwal

## **21. SWOT Analysis of the Department**

### **Strengths**

- Highly qualified, committed and stable faculty
- Strong linkages with IIT-B, BARC and ICT Mumbai
- Liberal faculty development policy and attitude
- Residential campus
- UGC grants under 12(B)
- Good research culture & work culture
- Autonomy & academic freedom

### **Weaknesses**

- No grant for M. Tech. programs: No faculty positions for M. Tech. programs
- Locational disadvantages:
  - Non-availability of mechanical engineering industry in the vicinity
  - Placement
  - Attracting visiting faculty
- Infrastructure: Lab space on the ground floor

### **Opportunities**

- Demand for researchers and innovators due to knowledge-driven economies:
  - Enhancing M. Tech. programs particularly in inter-disciplinary areas, starting dual degree programs
  - Enhancing Ph.D. programs
  - To become a QIP Centre for M. Tech. & Ph.D. programs
- Enhancing sponsored research, consultancy, CEPs for academia and industry
- Technical services to rural community by developing appropriate technologies
- Public-private partnerships

### **Challenges**

- Retention of faculty
- Attracting talented students
- Competition from foreign universities and private universities
- Competition from countries like China, Philippines, etc

## **22. Five-Year Development Plan of the Department (2016-2021)**

### **Expansion of Academic Activities:**

- Academic programs to be added:
  - M.Tech. in Design Engineering
  - M.Tech. in CAD/CAM in collaboration with Indo-German Tool Room
- To help in fetching QIP Centre to the University and become part of it.
- Each faculty member will have average three research scholars

### **Research & Development and Innovation:**

- Number of research scholars to be enhanced to 3 research scholars per faculty at any point of time.
- Each faculty member with Ph.D. qualification will have at least one sponsored project funded by external agency such as UGC/DST/AICTE/BRNS at any point of time.
- Each faculty member with Ph.D. qualification will have at least one consultancy project from Industry per year.
- At least five commercial products/processes/ technologies to be developed by 2021.

### **Extension & Outreach Activities**

- At least two CEPs/Workshops for industries/academia will be organized every year.
- At least one National/International conference to be organized every alternate year.
- At least 5 skill development programmes will be organized for the unemployed youth in the vicinity.

### **Faculty & Staff Development**

- Faculty will undergo on an average one week of training per year in the industry.
- Supporting staff will also undergo on an average one week of training as per training needs.

### **Networking**

- At any point of time, at least five network projects in collaboration with organizations like ICT, IIT, RRCAT, BARC and NCL will be going on.

### **Co-curricular/Professional Chapter Activities**

- SAE BAHA/ISHRAE chapters will be conducting activities with full swing. In addition, an ASM Students' Chapter is to be established.
- Robo Study Circle will be established for the students.

### **Infrastructure Development**

- New laboratory shades admeasuring 20000 sq ft. for various heavy duty and Precision Engineering Labs and workshop are to be constructed.
- A seminar room and at least one smart class room are to be provided.

\* \* \*

## **Department of Petrochemical Engineering**



**Prof. Vasant P. Jawanjal  
Head & Associate Professor**

### **Message from Head of Department**

It gives me immense pleasure in presenting the annual report for the academic year 2015-16. I feel proud to state that department was involved intensely in the holistic development of its student community in the last year, like previous twenty five years. This is reflected in our students, who are performing excellently in different walks of life, be it industry, research, academia, management or entrepreneurship.

Department considers academic activity as one of the most important but at the same time students are encouraged to participate and excel in extracurricular activities. Petrochemical Engineering Students Association (PESA), a student body, provides them an ideal platform for this. To tackle the increasing competition in the engineering field, department take conscious efforts by organizing workshops, guest lectures, industrial visits throughout the year.

The department will continue to support and encourage all the students for their overall development in the field of Chemical Engineering and prepares them to face challenges at global level in years to come.

**Prof. V.P. Jawanjal**

## **1. VISION AND MISSION STATEMENTS OF THE DEPARTMENT**

### **Vision**

The Department of Petrochemical Engineering aims to be ranked amongst the best departments in India for its teaching, research, creativity and innovation.

### **Mission**

To provide high quality education to enable our graduates to identify and achieve their goals.

## **2. ABOUT THE DEPARTMENT**

Department of Petrochemical Engineering holds the unique distinction of being the first department established in this University with an intake capacity of 30 students in 1989. Department has good infrastructure facilities, well-equipped laboratories, advanced software and a blend of experienced and young dynamic faculty. Department has organized different workshops at national level on topics like Energy Conservation, Plant Utilities and Steam Engineering during the last three years. From the academic year 2008-2009 the intake of students for the department has been increased to 60 from 30. Over the years, faculty members of the department have received grants for different projects from AICTE, UGC, and TEQIP. Students are performing excellently in different fields like Industry, Academia, Research and Management all these years.

## **3. Overview of Academic Programme:**

### **Academic Programs**

<b>Academic Program</b>	<b>Name of Program</b>	<b>Duration</b>	<b>Intake</b>
Bachelor of Technology (B.Tech.)	Petrochemical Engineering	Four Years	60

## **4. Programme Educational Objectives and Programme Outcomes**

### **Programme Educational Objective**

<b>Objective Identifier</b>	<b>Objective</b>
<b>PEO1</b>	To provide a solid foundation in mathematical, scientific and engineering fundamentals required to solve engineering problems.
<b>PEO2</b>	To impart rigorous training to students with good scientific and engineering breadth in core subjects so as to analyze, design and apply knowledge for development of novel products and create solutions for the real life problems.
<b>PEO3</b>	To prepare students to excel in technical fields in order to pursue postgraduate programs or to succeed in industry/technical profession, R&D institutions through global and new emerging areas in Chemical Engineering.
<b>PEO4</b>	To develop an ability to understand problems from other disciplines of science and engineering and provide solution by use of his professional skills.
<b>PEO5</b>	To impart skills necessary, as a professional, for adapting rapid changes taking place in the chemical and allied industries as well as getting ready for unconventional industries like software industry.
<b>PEO6</b>	To provide environment of knowledge and sense of responsibility towards ethical issues arising due to development of new technologies in the society on large scale.

### **Programme Outcomes**

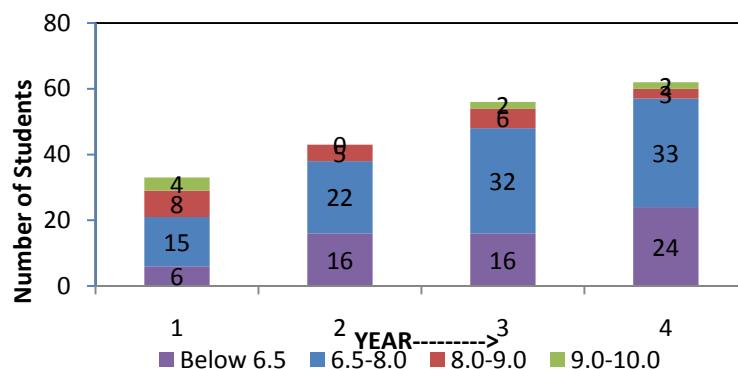
<b>Outcomes Identifier</b>	<b>Outcome</b>
<b>PO1</b>	The graduates will possess the fundamental knowledge of Mathematics, Physics, Chemistry, Chemical and Petrochemical Engineering.
<b>PO2</b>	The graduate will demonstrate an ability to identify, apply, analyze and solve Chemical Engineering problems.
<b>PO3</b>	The graduates will have an ability to develop and design process or operation for synthesis of a product within the realistic constraints.
<b>PO4</b>	The graduates will have an ability to use modern engineering tools for analyzing and optimizing different processes and operations.
<b>PO5</b>	The graduate will have broad understanding of the impact of Chemical and Petrochemical Engineering field in economic, environmental and social context and also will be aware of the contemporary issues.

<b>PO6</b>	The graduates will possess the knowledge of advanced and emerging topics in the fields of Chemical, Petrochemical and Energy Engineering.														
<b>PO7</b>	The graduates will possess communication skills necessary to communicate engineering ideas. The skill set includes verbal, written and listening skills.														
<b>PO8</b>	The graduates will demonstrate the ability to work and collaborate in heterogeneous teams.														
<b>PO9</b>	The graduates will demonstrate the awareness of professional and ethical responsibilities.														
<b>PO10</b>	The graduates will develop self confidence and ability for lifelong learning.														

#### UG Students Statistical Information

<b>Year</b>	<b>Open</b>			<b>SC</b>			<b>ST</b>			<b>OBC</b>			<b>VJNT</b>			<b>SBC</b>			<b>Total</b>		
	<b>M</b>	<b>F</b>	<b>T</b>	<b>M</b>	<b>F</b>	<b>T</b>	<b>M</b>	<b>F</b>	<b>T</b>	<b>M</b>	<b>F</b>	<b>T</b>	<b>M</b>	<b>F</b>	<b>T</b>	<b>M</b>	<b>F</b>	<b>T</b>	<b>M</b>	<b>F</b>	<b>T</b>
First	14	5	19	14	2	16	0	2	2	15	5	20	3	0	3	-	-	-	46	14	60
Second	15	9	24	9	2	10	-	-	-	16	11	27	6	1	7	3	0	3	48	23	71
Third	16	7	23	8	3	11	5	0	5	17	5	22	8	1	9	-	-	-	54	16	70
Fourth	22	7	29	8	2	10	4	0	4	18	2	20	8	5	13	-	-	-	60	16	76

#### Result Analysis



Number of Passing Undergraduates in each year is shown in the Chart of Current Academic year

#### Placement

<b>Placement Statistics</b>	
2011-12	19
2012-13	13
2013-14	15
2014-15	08

#### Details of Students Placed in the Year:

<b>S.N.</b>	<b>Name of the Student</b>	<b>Organization</b>
01	Ms. Jayashri Deshpande	Technimont Pvt. Limited, Mumbai
02	Mr. Raj Musale	UHP Technologies Pvt. Ltd., Banglore
03	Mr. Pankaj Gadekar	UHP Technologies Pvt. Ltd., Banglore
04	Mr. Muktaram Tidke	Arham Petrochemicals Pvt. Ltd., Ahmedabad
05	Mr. Kishor Kulkarni	NOCIL Ltd. Dahej, Gujrat.
06	Ms. Yogita Shinde	IoPE, Lonere

## 5.0 Faculty and Staff



**Prof. V.P. Jawanjal**  
Associate Professor  
M Tech ( Petrochemical Technology )  
Areas of Interest - Refinery Engineering, Separation Processes



**Prof. Mrs. S. S. Metkar**  
Associate Professor  
M Tech ( Chemical Engineering )  
Areas of Interest - Membrane processes, Reaction Engineering, Mass Transfer



**Prof. Ms. S. Chaudhari**  
Assistant Professor  
PhD ( Chemical Engineering )  
Areas of Interest - Catalysis, Mass Transfer

## Ad-hoc Faculty and Staff



**Ms. Priya Tanvidkar**  
Adhoc Faculty  
M Tech (Chemical Engineering)



**Ms. Pallavi Dekhne**  
Adhoc Faculty  
M Tech (Chemical Engineering)



**Ms. Pratsha Khade**  
Adhoc Faculty  
M Tech (Chemical Engineering)



**Ms. Rajashree Jundale**  
Adhoc Faculty  
M Tech (Chemical Engineering)



**Ms. Priyanka Ware**  
Lab Assistant  
B.Sc Chemistry



**Ms. Karuna Sangale**  
Lab Assistant  
B.Sc Chemistry



**Ms. Lochana Patil**  
Lab Assistant  
B.Sc Chemistry

## 6.0 Advisory Board and Board of Studies

S.N.	Name	Designation	Organization/Industry
01	Mr. Mahesh Purohit	General Manager	Aquapharma Ltd., Mahad
02	Mr. Suyog Sheth	Site Manager	Akzo Nobel India Ltd., Mahad
03	Mr. Parag Karambele	Manager -Technical	Excel Industries Ltd., Roha
04	Prof. Virendra Rathod	Professor	I.C.T., Mumbai
05	Dr. Amol Kulkarni	Scientist	N.C.L., Pune

## 7.0 Laboratory

- Petroleum and Petroleum Products Testing Laboratory
- Petrochemical Synthesis and Petroleum assay Laboratory
- Analytical Laboratory
- Computer Laboratory

**List of major equipment and other facilities:**

S.N.	Name of Major Equipment/Facility	Cost (>Rs. 1,00,000/-)
01	Gas Chromatograph	8.5 lakh
02	UV Spectrophotometer	3.1 lakh
03	Trace Metal Analyzer	5.8 lakh
04	Ion Chromatograph	8.5 lakh
05	High Performance Liquid Chromatography	1.25 lakh
06	Rheometer	17 lakh
07	Surface Area Analyser (BET )	3.00 lakh
08	Autoclave (High Pressure Reactor )	1.5 lakh
09	Particle Size Analyzer	5.0 lakh

**8. Projects**

**Project Topic List Year - 2015-2016**

S. N.	Topic Name	
1	Experimental Studies on Waste Plastic Pyrolysis	15 Investigation on Drying & Baking of Potato Chips
2	Design of Distillation Column	16 Extraction of Ursolic Acid Oclmum Sanctum
3	Removal of Phenol by Adsorptive Bubble Separation Method	17 Control System by RBS
4	Lab study on Synthesis & Performance Enhancement of SSP	18 Adsorption of Pesticides using Activated Carbon
5	Experimental Study of Effect of Ultrasonication on Biodisel Synthesis	19 Pyrolysis of Plastic to Form Gasoline Range Hydrocarbon
6	Recovery of Phosphorus from Poultry Litter	20 Reverse Polymerization
7	Manufacture of Oxalic Acid	21 Optimization of Chemical System
8	Manufacturing of Pectin From Orange Peels	22 Polymerization of Methyl Methacrylate
9	Study of Extraction of Rice Bran with Solvent	23 Toluene Methanol Sepration by Using Distillation
10	Study of Rheology of Newtonian and Non-Newtonian Fluids	24 Silica Removal from Rice Husk Ash
11	Optimization of Chemical Process using Genetic Algorithm	25 Simulation of Chlorobenzene Process in Aspan
12	Dehydration of Ethanol by Extractive Distillation	26 Production of Biodisel From Waste Cooking Oil
13	Production of Soap from Different Types of Oil	27 Dairy Waste Water Treatment by Using Water Hychinth Plant
14	Kitchen Waste Water Purification by Sugarcane Bagasse	28 Comparative Study on Separation Techniques
		29 A Study of Reverse Osmosis Membrane Separation
		30 Optimal Tuning of Controller Parameters by Using PSO

**9.0 Industry Institute Interaction**

**9.1 Industrial Project by Students**

A group of three female students, Ms. Randale Rajshree (Reg.No.20120539), Ms. Samarth Neha (Reg. No. 20120547) and Ms. Waghmare Rupali (Reg. No. 20120560), from Final year B.Tech successfully completed project at Embio Ltd. Mahad on “Toulene- Methanol Separation by Distillation”.

**9.2 Industrial Visits**

- Industrial visit of second year student to Gharda Chemicals, Chiplun, on 23<sup>rd</sup>July, 2015
- Thirty-eight students from third year B.Tech. attended three days STTP on “ Unit Operations and Unit Processes in Chemical Industry” at RCF Mumbai from 18- 20 January, 2016 under TEQIP-II.
- Thirty-eight students from third year B.Tech. attended three day S. T. T. P. on “Unit Operations and Unit Processes in Chemical Industry” at RCF Mumbai from 8-10<sup>th</sup> February, 2016 under TEQIP-II.



An Industrial visit to RCF Chembur from 10-12 February 2016.

## 10. Conferences/Workshop/Training Conducted Under TEQIP-II

- Eighteen Final Year B.Tech. students have undergone training on “Soft Skills” from 18-24<sup>th</sup> August, 2015, at Dr. B.A.T.U. Lonere, under TEQIP-II.
- Workshop on Personality Development, “ Even Higher Skills” for first year students by Dr. Vinod Patankar from 24-25<sup>th</sup> October,2015, at Dr. B.A.T.U., Lonere, under TEQIP-II.
- Guest lecture on “Secrets of Professional Communication for Better Personality and Career” on 2<sup>nd</sup> November, 2015, by Prof. Atul Patil (CoEP, Pune), at Dr. B.A.T.U., Lonere under TEQIP-II.



Personality Development Workshop- Even Higher Skills

## 11. Workshop Attended by Faculty, Staff and Students of Department:

### 11.1 Departmental Staff Activities:

- Prof. Pallavi Dhekne, Prof. Rajashree Jundale, Prof. Priya Tanvidkar and Prof Pratiksha Khade attended one day training program on “Pedagogy” at DBATU, Lonere, on 3<sup>rd</sup> October, 2015, under TEQIP-II.
- Prof. S. S. Metkar, Prof. Pallavee Dhekne, Prof. Rajashree Jundale attended one week workshop on ‘Optimization’ at IIT Bombay, from 2-6 November, 2015, under TEQIP-II.
- Prof. S. S. Metkar attended one week workshop on, “Recent Trends in Energy Conservation” at Dr. Babasaheb Ambedkar Technological University, Lonere from 7-12 December, 2015, under TEQIP-II
- Prof. V. P. Jawanjal attended a two days workshop on “Outcome Based Education” at D. Y. Patil College of Engineering, Pimpri, Pune from 9-10 January, 2016.
- Prof. S. S. Metkar participated in “Avishkar 2016” organized by Pune University during 10-12January, 2016 as Team Manager.
- Prof. V.P. Jawanjal delivered a guest lecture on , “Understanding Chemical Engineering Thermodynamics for Chemical Engineering Professionals” at M.I.T., Aalandi, Pune on 27<sup>th</sup> February, 2016.

### 11.2 Departmental Staff Activities:

- Mrs. Priyanka N. Ware attended two days workshop on “Life Skills” on 7<sup>th</sup> & 8<sup>th</sup> August, 2015 at Dr. B.A.T.U. Lonere under TEQIP-II.

## **12 Other Activities Conducted by Department**

- Teachers' Day Celebration by first year student on 5<sup>th</sup> September, 2015.
- Department organized its first Alumni Meet on 12<sup>th</sup> March, 2016.
- Department organized Farewell Function to final year students on 2<sup>nd</sup> May, 2016.
- Parent-Teacher meet conducted on 10<sup>th</sup> October, 2015.
- Department celebrated Khande-Navmi on 21<sup>th</sup> October, 2015.
- Fresher's Welcome Function "Petrochem La Fiesta 2015" on 3<sup>rd</sup> October, 2015.
- Feedback Collection.

## **13. Academic Achievements**

### **13.1 Faculty Achievement**

Prof. S. S. Metkar participated in "Avishkar 2016" organized by Pune University 10<sup>th</sup>-12<sup>th</sup> January, 2016 as Team Manager and participant in teachers' category.

### **13.2 Distinguished Alumni of the Department**

S.N.	Name of Alumni	Designation and Company
1	Mr. Siddhartha Desai	Entrepreneur, Option Engineering Pvt. Limited, Jogeshwari, Mumbai
2	Mr. Durgesh Karande	Asst. Vice President, Polaris Financial Technology Ltd.
3	Mr. Amit Agvekar	Manger-Projects, Cognizant Technology Solutions India Pvt. Ltd., Pune
4	Mr. Manish Garg	Sr. Project Engineer- Mangalore Refinery and Petrochemicals Ltd.
5	Mr. Ravindra Bhosale	Manager-Project , Embio Limited, Mahad, Raigad
6	Mr. Suyog Shet	Site Manager- Akzo Nobel Chemicals (India) Ltd., Mahad, Raigad
7	Dr. Shrish Sonawane	Associate Professor, National Institute of Technology, Warangal (A.P.)
8	Mr. Makarand Kurkure	Project Leader- Larson and Toubro Infotech Ltd., Powai, Mumbai
9	Dr. Sharad Sonnatakke	Associate Prof., Dept. of Chemical Engineering, ICT, Mumbai
10	Mr. Laxmikant Powale	Lead IP Professional, GE India Technology Centre Pvt. Ltd., Bangalore
11	Mr. Ajit Pawar	Sr. Manager-Process & Tech., ARMACO consultant Pvt. Ltd., Mumbai

### **13.3 Student Achievements**

- Mr. Nishesh Rohatgi succeeded in GATE-2016 with AIR 1751.
- Chinmay Saraf and Riya Patil won 2<sup>nd</sup> and 3<sup>rd</sup> prize respectively in State Level Inter University Cultural Festival, "Utkarsha – 2016" at Rahuri Krushi Vidyapith, Rahuri from 4th- 7th February, 2016.
- Mr. Shrikant N. Dongre and Mr. Sandip M. Lokhande from third year B.Tech got selected for scholarship from NGO, Cummins India Foundation, Pune.

## **14. Petrochemical Engineering Students Association (PESA) Council 2015-16**

- **President:** Mangesh Salunke
- **Cultural Secretary:** Sagar Raorane, Neha Samarth
- **Sports (Boys Representative):** Akshay Shelmake, Gayatri Matharkar
- **Literature Secretary (Boys Representative):** Kishor Kulkarni, Bhagyashri Khole
- **Treasurer :** Nishesh Rohatagi

## **15. Extracurricular Activities**



## 16. Students Other Activities



## 17. Department Strength, Weakness, Opportunities And Threats

### Strengths:

1. Dedicated and motivated faculty members.
2. The curriculum design is a perfect blend of core chemical engineering content along with extension to the area of petroleum sector in depth.
3. Curriculum is designed to take care of changing scenario in terms of techno-economic as well as social changes. For these software based courses, inclusion of industrial training and interdisciplinary interaction are encouraged.
4. The department regularly gets handful amount of funding from AICTE, UGC, and State Government by way of various research or other projects.
5. Guidance and support from Alumni.

### Weaknesses:

1. Maintenance of equipment and analytical instruments is a big challenge. Lack of expertise at local level in addition to unavailability of spares adds to sudden disruption.
2. Lack of permanent and adequate space for laboratory and class room.
3. Faculty shortage.

### Opportunities:

1. The University is surrounded by industrial belt (Specially Chemical Industries and petrochemical Complexes )
2. Every year many of our students get placement in reputed industries like Infosys, Cognizant, and many chemical industries but still there is a scope for full utilization of nearby industrial environment for betterment of student community.
3. Conducive environment for Collaborations and Availability of Industrial Expertise

### Challenges:

1. Getting qualified faculty members and improving their retention period.
2. Attracting good CET score students for UG program.

### Future plans of the Department:

- To create, preserve and disseminate technical knowledge.
- To create an intellectually stimulating environment for research, scholarship, creativity, innovation and professional activity.
- To foster relationship with other leading institutes of learning and research, alumni and industries in order to contribute to National and International development.
- To promote competitive merit and excellence as the sole guiding criterion in overall development of students strive for centre of excellence in the field of Chemical and Petrochemical Engineering.



# Department of Chemistry



**Dr. H. A. Mujawar**  
Associate Professor & Head

## 1. Mission:

To impart the basic knowledge of Chemistry and their applications to various field of Engineering and Technology.

## 2. About the Department:

Department of Chemistry was established in the year 1989 with B.Tech programs in various fields of Engg. and Technology. Department is engaging theory and practical in the subject of Engineering Chemistry I & II for all the first year B. Tech Courses. The curriculum was designed which fulfils the need of fundamentals of chemistry required to the courses of Technology. Department is well equipped with state-of-art analytical equipment. Department is engaged in research by offering Ph.D. programs in chemistry since 2003. We have published good no. of research papers in the area of Photo catalyst, Environmental Chemistry, Solid state chemistry, Photochemistry etc.

## 3. Course offered with Intake:

a) Engineering Chemistry I & II to all B.Tech. Courses	:	540 (Intake)
b) Ph. D. (Registered Candidates)	:	03

## 4. Course outcomes:

It is expected that by the end semester student will develop the following competencies.

- Students should be able to understand and explain the basic concepts of physical properties in the liquid state and capable to measure these properties.
- Students should be able to classify and explain various types of coals and lubricants, its properties and importance.
- Students should know the concept of corrosion, water chemistry, Phase rule and Electrochemistry.
- Students should be able to understand fundamentals of aromatic and heterocyclic compounds.

## 5. Faculty



Dr. H. A. Mujawar  
Head of the Department  
Associate Professor  
Ph. D. (Chemistry)  
Member of BoS (Basic Sciences and Humanities)  
Member of Academic council  
Member of Research Committee  
Co-ordinators / members of various events of University  
Research areas: Env. Chemistry, Solid State Chemistry



Dr. P. B. Lokhande  
Associate Professor  
Ph. D. (Chemistry)  
Member of BoS (Basic Sciences and Humanities)  
Member of Academic council  
Member of Research Committee  
Co-ordinators / members of various events of University  
Research areas: Environmental Chemistry, Solid State Chemistry

## Contract Faculty



Miss. A. S. Isane  
Assistant Professor  
M Sc. (Organic Chemistry)  
Mumbai University  
2 Years of Experience



Miss. A. A. Khanvilkar  
Assistant Professor  
M Sc. (Organic Chemistry)  
Mumbai University  
2 Years of Experience

**Staff**

Mrs. C.D. Sutar  
Lab-Assistant  
B Sc. (Chemisrty)  
Since February 2009



Mr. R. S. Shinde  
Lab-Assistant  
B Sc. (Chemisrty - 2014)  
Since June 2014



Mr. U.K. Chavan  
Peon

**Research Scholar**

Ms. M.M. Bhagat  
Research Scholar  
(RS 20140901)  
M Sc. (Nagpur University)  
Research Area: Photocatalysis



Ms. S.S. Salvi  
Research Scholar  
(RS 20150901)  
M Sc. (Mumbai University)  
Research Area: Photocatalysis



Mr. Abhijit Dinde  
Research Scholar  
(Rs 20140902)  
M.Sc. (Mumbai University)  
Research Area: Phytochemistry

**6. Departmental Advisory Committee:**

To monitor the progress activity of Department.

Dr. H. A. Mujawar	Chairman
Dr. P. B. Lokhande	Member
Miss. A. S. Isane	Member
Miss. A. Khanvilkar	Member
Mrs. C. D. Sutar (Lab Assistant)	Member
Mr. Vitthal Waghmare (Student)	Member
Mrs. M. M. Bhagat (Research Scholar)	Member

**7. Departmental Purchase committee:**

Dr. H. A. Mujawar	Chairman
Dr. P. B. Lokhande	Member
Dr. B.B. Singh	Member
Dr. S. G. Dahotre	Member
Store Verification Officer	Member
Finance Officer	Member

**8. Research Committee:**

Dr. B. B. Singh	Chairman
Dr. H. A. Mujawar	Member
Dr. L. N. Singh	Member
Dr. P. B. Lokhande	Member
Dr. S. G. Dahotre	Member
Dr. A. K. Nikumbh	External Member
Dr. M. H. Pendse	External Member

## **9. List of major equipment and other facilities:**

Laboratory is well equipped with following Analytical instruments such as

- Colorimeter
- Gas Chromatograph
- COD digester with titrator
- pH and conductivity meter
- Turbidity meter
- Photoreactor
- Visible Spectrophotometer
- Refractometer
- Oven/Incubator

## **10. Journal Publications:**

Name of Faculty Member	Name of Journal	Issue no., Vol. no., Year	Paper Title
Dr. P.B. Lokhande	International Journal of Scientific and Engineering Research.	Vol. 7 (3)	Graphic Interpretation and assessment of water quality in the Savitri River Basin
Dr. H.A. Mujawar		March 2016, 1113-1121.	

## **11. Conferences / Seminar/Workshop (Attended and presented papers)**

Name of Faculty	Place	Period	Organised by
Dr. H.A.Mujawar, Dr. P. B. Lokhande	University of Mysore, Mysore	3 to Jan 7, 2016.	Indian Science Congress Association Conference
Madhuri M. Bhagat Dr. H.A.Mujawar, Dr. P.B. Lokhande	KBP College, Vashi, Navi Mumbai – Maharashtra.	30 <sup>th</sup> Jan 2016	National conference on new horizons in chemical and environment science A review: Advanced photo catalyst and its applications
Sneha S. Salvi, Dr. P.B. Lokhande, Dr. H.A. Mujawar	KBP College, Vashi, Navi Mumbai – Maharashtra.	30 <sup>th</sup> Jan2015	National conference of new Horizons in Chemical and Environmental Science. A review recent trends in synthesis of photo catalyst
Dr. P.B. Lokhande	Ramchandra University, Chennai	17-18 Feb, 2016.	National conference on photochemical and Biotherapeutics
Sneha S. Salvi, Madhuri Bhagat	Dr. BATU, Lonere	19-20 March 2016	Training on Advanced MS Office
Madhuri Bhagat Abhijit Dinde Dr. P.B. Lokhande	Dapoli Science College, Dapoli Ratnagiri.	5-6 Feb 2016	National conference on Recent development in Chemical and material Sciences.

## **12. Chemistry Laboratory:**





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## Department of Mathematics



**Dr. B.B. Singh**  
**Associate Professor and Head**

### **Message from Head of Department**

**यथाशिखामयूराणानागणांमनियोयथा**  
**तथावेद्-वेदांगमगणितंमूहीनंसंस्थितं ॥**

(As the peacock is superior to all the birds because of crest on its head; as the king cobra is superior to all the snakes because of its bead, so is the man superior to all the men who is having knowledge of Mathematics as per our Vedas and Scriptures)

Mathematics is not a book confined within a cover and bound between brazen clasps, whose contents it needs only patience to ransack; it is not a mine, whose treasures may take a long to reduce into possession, but which fill only a limited number of veins and lodes; it is not a soil, whose fertility can be exhausted by the yield of successive harvests; it is not a continent or an ocean, whose area can be mapped out and its contour defined: it is limitless as that space which it finds too narrow for its aspirations; its possibilities are as infinite as the worlds which are forever crowding in and multiplying upon the astronomer's gaze; it is as incapable of being restricted within assigned boundaries or being reduced to definitions of permanent validity, as the consciousness of life, which seems to slumber in each monad, in every atom of matter, in each leaf and bud cell, and is forever ready to burst forth into new forms of vegetable and animal existence.

The syllabi of Mathematics to be taught at UG level have been framed keeping the afore-mentioned philosophy into view. In addition to teaching UG classes, the Department of Mathematics is also actively involved in the conduct of Ph.D. programmes, especially in Applied Mathematics- e.g. Fluid Mechanics, Computational Fluid Dynamics, Heat Transfer.

In the light of the above message, I think the curriculum of Mathematics adapted in our University will pave the way for our students to face the challenges of Engineering Sciences in years to come.

**Dr. B. B. Singh**

### **1. Vision and Mission Statements for Department**

#### **Vision:**

The Department of Mathematics strives to be recognized for excellence among academic institutions in India and abroad through the depth of its teaching and research, and to be locally relevant through its role in the development

of the community it serves. The Department wishes to focus on providing a comprehensive curriculum at undergraduate and Ph.D. programmes, relevant research and career opportunities in India and abroad.

### **Mission:**

To promote teaching, research and mathematical understanding of students, and to inculcate in a student a deep sense of analysis of all fundamental principles, concepts and practices in the specialized areas of sciences, engineering and technology.

## **2. About the Department**

The Department of Mathematics came into existence in the year 1989. The Department is mainly devoted to impart education of Mathematics at UG level. That is why; it has taken all the various aspects into consideration while framing the course structure of Mathematics subjects at UG/Doctoral level to suit the requirements of today's Scientists, Engineers and Applied Mathematicians. To meet the end, the subjects like Engineering Mathematics I, II and III have been introduced at UG level of engineering education of our University. In this way, the first objective of the Department while framing the syllabi has been to make available much of post-calculus Mathematics needed and used by scientists and engineers, in a setting that is helpful to both engineering students and faculty. The second objective has been to establish the acquaintance of the students with various computational techniques required by scientists and engineers in order to solve the problems pertaining to physical, social, economic and biological sciences.

## **3. Program Educational Objectives (PEOs) & Programme Outcomes (POs)**

### **Programme Educational Objectives (PEOs)**

- To prepare students to excel in technical fields in order to pursue post graduation in Engineering and Sciences programs or to succeed in industry/technical profession, R&D institutions through global and new emerging areas in Mathematics
- To provide students with a solid foundation in mathematical fundamentals required to solve engineering problems
- To train students with good mathematical breadth in core subjects so as to comprehend and simulate to cater changing needs of society, analyze, design, and create novel products and solutions for the real-life problems
- To provide students with conducive academic environment, awareness of excellence and the life-long learning in mathematical concepts needed for successful professional career.

### **Programme Outcomes (POs)**

The graduates will possess the knowledge of differential equations, vector calculus, complex variable, matrix theory, probability theory, partial differentiation, infinite series, Fourier series, Fourier transforms, Laplace transforms, Integral equations, Mean value theorems, etc.

## **4. Overview of Academic Programs**

Besides the teaching of Engineering Mathematics of B. Tech. courses, the Department has an active Ph.D. programme under the aegis of TEQIP. This involves broad-based course work followed by directed research. Students currently pursue doctoral research in the area of Fluid Mechanics. Till date, the degree of Doctor of Philosophy (Ph.D.) in Mathematics has been conferred on three students. At present, two Ph.D. students are undergoing the Ph.D. programmes in the Department.

## **5. Faculty Contribution in the Department of Mathematics**

The faculty position of the Department is as follows:

Faculty	Designation	Qualification	Area of Specialization
Dr. B. B. Singh	Associate Professor	M.Sc., Ph.D. (BHU)	Fluid Mechanics
Dr. V. J. Bansod	Associate Professor	M.Sc., Ph.D. (IIT, Kanpur)	Computational Fluid Dynamics
Mr. C. N. Guled	Teaching Assistant	M.Sc.	Fluid Mechanics
Ms. Nasreen Bano Shaikh Muslim	Teaching Assistant	M.Sc.	Fluid Mechanics
Mr. Ravindra Sonawane	Assistant Professor (Adhoc)	M.Sc.	Applied Mathematics
Mr. Sayaji Jadhav	Assistant Professor (Adhoc)	M.Sc.	Applied Mathematics

## **6. Major contributions of the faculty members**

### **(1) Dr. B. B. Singh**

Dr. Singh joined the Department in the year 1993. Ever since his joining in the Department, he has been contributing to the development of the Department of Mathematics in particular and to the University in general in various capacities. Under his guidance, two students have been awarded the degree of Doctor of Philosophy (Ph.D.) so far. Besides, he is currently guiding two Ph. D. students, namely Mr. Chandrakant N. Guled and Ms. Nasreen Bano.

Dr. Singh contributed to the Department as

- i. Head of the Department
- ii. Member and Chairman of Board of Studies in Sciences and Humanities
- iii. Rector of the Hostels of the University
- iv. Member of Library Committee
- v. Chairman of Quality Circle of the University
- vi. Ph.D. Guide
- vii. Member of University Academic Council
- viii. Authors of Text/Reference Books
- ix. Conduct of STTPs
- x. Resource Person
- xi. Resource Person for the Personality Development Programme

### **(2) Dr. V. J. Bansod**

Dr. Bansod joined the Department in the year 1995. Dr. Bansod has contributed in the following capacity:

- i. Head of the Department
- ii. Chairman of Board of Studies
- iii. Rector of Hostel
- iv. Member of Library Committee
- v. Ph.D. Guide
- vi. Member of University Academic Council

### **(3) Mr. C. N. Guled**

Mr. Guled is presently pursuing his Ph.D. programme under the aegis of TEQIP (II). In addition to this, he is also sharing some teaching work-load of the Department. His name is also figuring on the Departmental Committee responsible for making decisions related to the implementation of policies.

### **(4) Ms. Nasreen Bano Muslim Shaikh**

She is presently pursuing her Ph.D. programme under TEQIP (II). Her name is also on the Departmental Committee for the formulation of the vision of the Department and translation of vision into policy.

### **(5) Mr. Ravindra Sonawane**

Mr. Sonawane is rendering his services to the Department in the capacity of Assistant Professor (contract basis).

### **(6) Mr. Sayaji Jadhav**

Mr. Sayaji Jadhav is also giving his services to the Department as Assistant Professor (contract basis).

## **7. Publications**

### **7.1 Books**

S.N.	Title	Author/s	Publisher
1	A Course in Engineering Mathematics (Vol. I) (ISSN: 978-93-8335-216-6)	Dr. B. B. Singh and Dr. I. M. Chandarki	Synergy Knowledgeware, Mumbai
2	A Course in Engineering Mathematics (Vol. II) (ISSN: 978-93-8335-210-4)	Dr. B. B. Singh	Synergy Knowledgeware, Mumbai
3	A Course in Engineering Mathematics (Vol.III) (ISSN: 978-93-8335-217-3)	Dr. B. B. Singh	Synergy Knowledgeware, Mumbai
4	Engineering Mathematics-II (ISSN: 978-81-8407-900-5)	Dr. B. B. Singh, Prof. T. D. Pawar, Dr. I. M. Chandarki and Prof. S. S. Hiremath	Tech-Max Publications, Pune
5	Integral Transforms and Their Engineering Applications (ISBN: 978-81-924-2747-8)	Dr. B. B. Singh	Synergy Knowledgeware, Mumbai

## 7.2 Monographs

A Quantitative and Analytical Analysis of the Laminar Boundary Layer Equations	Dr. B. B. Singh	Lambert Academic Publishing, Germany
Elastico-viscous Fluid Flows	Dr. Sanjay Kulkarni and Dr. B. B. Singh	Lambert Academic Publishing, Germany
Asymptotic Behaviour , Convex-Concave and Oscillatory Solutions of Non-autonomous Differential Equations	Dr. B. B. Singh and Dr. I. M. Chandarki	Lambert Academic Publishing, Germany
Research Methodology and Quantitative Methods of Computer Applications (ISBN: 978-3—659-87791-9)	Dr. B. B. Singh and C. N. Guled	Lambert Academic Publishing, Germany

## 7.3 Research Publications in Conference/Proceedings

Asymptotic Behaviour of The Velocity Profiles In The Rotation of A Disk, Proceedings of Mathematical Society, BHU, 2015 by Dr. B. B. Singh and C. N. Guled

Application of Differential Transformation Method and Pade` Approximation to MHD Boundary Layer Flow over a non-linear Stretching Sheet, Proceedings of Mathematical Society, BHU, 2016 by Dr. B. B. Singh and C. N. Guled

## 8. Continuing Ph.D. Programmes in the Department

Currently two Ph.D. students are pursuing their Ph.D. programmes on full-time basis under the aegis of TEQIP-II. They are working in the area of Fluid Mechanics. Their themes are related to Boundary Layer Theory. The deduction of boundary layer equations was one of the most important advances in fluid dynamics. Using an order of magnitude analysis, the well-known governing Navier-Stokes equations of viscous fluid flow can be greatly simplified within the boundary layer. Notably, the characteristic of the partial differential equations (PDE) becomes parabolic, rather than the elliptical form of the full Navier-Stokes equations. This greatly simplifies the solution of the equations. By making the boundary layer approximation, the flow is divided into an inviscid portion (which is easy to solve by number of methods) and the boundary layer, which is governed by a set of PDE, which are still nonlinear and are not easily solvable (except for few precise flows).

The boundary layer equations are the set of nonlinear partial differential equations which are complicated for the close form solutions. Therefore with similarity techniques they are transformed to the set of ordinary differential equations which are still nonlinear.

Studies of the boundary layer respond on mean free stream fluid motion are of fundamental importance in many aero-dynamical and industrial flow situations. Typical problems arise in the study of artificial response to the atmospheric gusts, in aerofoil lift and stalling flutter as well as in prediction of flow over helicopter rotor blades and through turbo-machinery blade cascade.

The study of similarity boundary layer theory may be extended to the MHD, Temperature etc flows. The Falkner-Skan (1931) equation constitutes a third order, nonlinear two point boundary value problem, and no exact analytic solution reported for it.

In case of  $\beta=0$ , the Blasius equation is obtained. This equation is perhaps one of the most famous equations of the fluid dynamics and represents the problem of an incompressible fluid that passes on a semi-infinite flat plate. In the case of accelerating flow, the velocity profiles have no points of inflection, physically relevant solution exists only for  $-0.1988 \leq \beta \leq 2$ .

Numerous scientists and engineers reported the numerical solution for Blasius, Falkner-Skan and other Falkner-Skan type equations for the pertinent parameter of the respective flow. For some boundary layer equation governing the flow, the solutions obtained are far away from exact solutions. Therefore they need improvement for further investigation of the flow nature. This is where the research problem is originated.

The conservation equations (mass, momentum and energy) describe the flow and the thermal field in a viscous fluid. These equations, however, are so involved that a simplification is highly desirable in order to reduce the effort of obtaining solutions. Such simplifications can be made for very small or for very large Reynolds numbers. The simplifications, for large Reynolds numbers, are most significant from engineering point of view. Hence, it is natural to expect fairly close agreement between practical observations and the conclusions of the inviscid flow theory which neglects viscosity altogether and regards the Reynolds number as infinite. However, even though the theory supplies a satisfactory description of real motion in cases such as the motion of the surface waves, the formation of liquid jets, the lift and drag of an aerofoil and so on; it fails to explain many other important flow phenomena, no slippage and the like. Since the inviscid flow theory has been developed to an instrument of great elegance and power, the flow in the external stream can be calculated easily on the assumption of the no boundary layer using the inviscid boundary layer approximation. So, the main concern of the boundary layer theory is to deal

with the flow in the boundary layer by integrating the boundary layer equations and computing the skin-friction and the temperature or heat-transfer at the solid boundary. An especially simple class of exact solutions of the boundary layer equations is similar solutions. Similar solutions exists in certain flows in which the velocity profiles at different positions on the body have a similar shape; i.e. differing at most by some scale-factor. This reduction to ordinary differential equations is possible with the help of similarity technique which essentially consists of converting the partial differential equations to ordinary differential equations.

Fortunately, there are a number of circumstances, for instance, flow past a yawed infinite wing, three-dimensional stagnation point flows, three-dimensional axi-symmetric flows with swirl etc., wherein the final reduction to a single independent variable is possible. The Falkner-Skan equations governing the flow of similar velocity profiles, MHD Falkner-Skan and corresponding heat transfer equations, boundary layer equations in an incompressible stagnation flow and boundary layer flow at a three-dimensional stagnation point with weak blowing are obtained after applying ‘similarity’ transformation on certain boundary layer equations. This is the significance of the study.

The objectives of their present research plans are to study the behaviours of the solutions of the similarity boundary layer equations governing problems of physical significance; especially using the methods namely Differential Transformation Method (DTM), Taylor’s Series Recursive Method, Pade Approximation, Homotopy Analysis Method (HAM) and Optimal Homotopy Analysis Method (OHAM).

## **9. Participation/Attendance in Summer & Winter Schools / National & International Conferences/Workshops**

- Dr. B. B. Singh participated in a Faculty Development Programme on - ‘Recent Trends in Energy Research’, organized by Chemical and Mechanical Engineering Department of Dr. BATU, Lonere, during 7.12.2015 to 11.12.2015 (One week).
- Dr. B. B. Singh participated in the MHRD-TEQIP-KITE one week Workshop under the ‘Knowledge Incubation under TEQIP’ on -‘Mathematical Principles in Engineering’, organized by IIT, Bombay, during 18.06.2016 to 22.06.2016(One week).
- Dr. B. B. Singh participated in one week Workshop on- ‘Outcome Based Education’, organized by Dr. BATU, Lonere, during 23.06.2016 to 28.06.2016.
- C. N. Guled presented a research paper on the topic entitled- “Application of Differential Transformation Method and Pade` Approximation to MHD Boundary Layer Flow over a non-linear Stretching Sheet” (Authors: C. N. Guled and Dr. B. B. Singh) at the Annual Conference of The Mathematical Society-Banaras Hindu University on ‘Mathematical and Statistical Techniques and Their Applications to Science and Engineering’ organized by Dehradun Institute of Technology, Dehradun during November 20-21, 2015.
- C. N. Guled presented a research paper entitled- “The Solution of Glauret-Jet Problem by Differential Transformation Method and Pade` approximation”(Authors: C. N. Guled and Dr. B. B. Singh) at the 103<sup>rd</sup> Annual Conference of Indian Science Congress on the theme of ‘Science and Technology for Indigenous Development in India’ organized by Mysore University, Mysore during January 3rd-7th, 2016.

## **10. Lecture Delivered**

- Dr. B. B. Singh delivered a talk on- ‘Role of Assertiveness in Team Building in a Faculty Development Programme on- ‘Recent Trends in Energy Research’, organized jointly by the Department of Chemical and Mechanical of our University during December 7th-11th, 2016 under the aegis of TEQIP-II.

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## **Department of Physics**



**Dr. L.N. Singh**  
**Associate Professor and Head**

### **1. Message from Head of Department**

It gives me immense pleasure to present the annual report of my Department. History of mankind is history of science and history of science is history of physics. Over the course of history other sciences branched off from Physics to become science in their own right.

All modern Engineering and technology is rooted in the laws of Physics as Engineers and Scientists apply the laws and discoveries of Physics to develop practical devices like automobiles, computers, electricity generators, electronics devices, nuclear reactors, bridges, tunnels and space shuttles. Hence, Physics is basis for all technological developments. None of the fronts, social, human, environmental or economic can be thought of as far as development is concerned without Physics.

The Department runs Ph.D. programme in the area of Ferrites, Garnets and CMR Nano Materials. The Department also runs course on Engineering Physics – I and Engineering Physics – II which is a part of B.Tech. Programme in all branches at the first year level at present. The Department has set up Nanoscience Laboratory. Seminars are regularly organised to enhance the latest knowledge of the research field.

**Dr. L.N. Singh**

## **2. Vision and Mission Statements of Department**

### **Vision**

To promote excellence in teaching, research and scientific understanding among engineering students.

### **Mission**

To inculcate in the students a deep understanding in Science and Scientific Principles in order to develop strong basis for acquiring technical knowledge and skill.

## **3. About the Department**

The Department of Physics was established in the year 1989 to offer a foundation in Physics to provide all basic and scientific knowledge to the various disciplines of undergraduate, post graduate students of Engineering and Technology. The department has started Ph.D. programme from the academic year 2004. Department is also offering fellowship to Ph.D. students under TEQIP project.

The curriculum designed is a perfect blend of Physics. The focus of the department is to produce graduates & Ph.D. with strong fundamentals in Physics and Applied Physics. The department has state of the art laboratories to cater for curricular requirements as well as research.

The faculty members are having strong background of research in the current issues of the discipline. The department has Solid State Physics, Spectroscopic and Nanoscience Lab and collaborations with IIT Bombay and Mumbai University. Five students have completed their Ph.D. in the field of CMR Materials, Nano Ferrites, Carbon Nano Tubes and Fuel Cells. Two students are working in Nano Ferrites and Garnets. Dr. L.N. Singh visited USA, Italy, Germany, Singapore, Japan, Malaysia, France, Switzerland, U.K., Belgium, Austria, Australia and New Zealand for academic and research purposes. He is also invited as visiting faculty by Gombe state University, Nigeria. One of the Ph.D. students has got Post Doctoral fellowship from Italy.

## **3. Faculty and Staff**

### **Faculty**

Dr. L.N. Singh  
Associate Professor and Head  
M. Sc. - Banaras Hindu University, Varanasi,  
Ph.D. - IIT Bombay  
24 Years of Experience



Dr. S.G. Dahotre  
Associate Professor  
M.Sc. Pune University



### **Ad-Hoc Faculty**

Mr. A.R. Bhalekar  
Assistant Professor  
M. Sc. – Pune University  
3 Years of Experience



Mr. U.V. Shinde  
Assistant Professor  
M. Sc. – Pune University  
1 Year of Experience

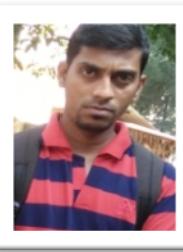


## Staff

Mrs. M. A. Shinde  
Lab Assistant  
Diploma in Extc



Mr. K.D. Mhapralkar  
Lab Assistant  
ITI



## 5. Additional Responsibilities to the Faculty

### Dr. L.N. Singh

- |  |                                      |
|--|--------------------------------------|
| • Member of Executive Council  | Member of Academic Council           |
| • Member of Board of Studies   | Professor Library In charge          |
| • CAP Director   | In charge of Science day celebration |
| • Faculty Adviser of first year students                                 | Inspired award Examiner              |
| • Co-ordinator of NAAC Presentation of Science and Humanities Department |                                      |
| • Member for the promotion of non teaching staff                         |                                      |
| • Sanskaran adhikari   | TEQIP Member                         |

### Dr. S.G. Dahotre

- Rector of hostel.
- I/C Head of Department
- Member of Anti-ragging Committee
- Examination Co-ordinator
- Sr. Supervisor for examination
- Member B.Tech. Admission Process
- Co-ordinator of Science day celebration

## 6. Advisory Board

To provide time to time guidance and monitor the activities for the development of the department, Advisory Board for Physics department is formed. Following are the accomplished members from reputed industry and academic institute. The Advisory Council/Board is entrusted with responsibility of conducting academic audit of department, suggesting dynamic curriculum and providing input for research activities.

S.N.	Name	Designation
1	Prof. S. S. Major	Department of Physics, IIT, Bombay
2	Prof. Ajit Kulkarni	Department of Metallurgy And Material Science
3	Prof. M. Aslam	Department of Physics IIT Bombay.
4	Dr. M. A. Madare	Associate Professor and Head Department of Physics, IMJ College, Mumbai University.
5	Prof. C. S. Garde	Department of Engineering and Applied Sciences, Vishwakarma Institute of Information Technology, Savitribai Phule Pune University.

## 7. Faculty Research and Publications

### A) Papers published in international Journals(Impact Factor – 2.3)

1. Morphology and  $g_{eff}$  Study of Nano  $Mn_{1-x}Zn_xFe_2O_4$ , S.G. Dahotre and L.N. Singh, Journal of Nanotechnology and Nano-Engineering, Volume 1, issue 3, 1-5 (2015)

## 8. Laboratory

### Major Instruments in Laboratory

S.N.	Name of the Instrument	Qty	Total price
1	Vacuum oven $800^0 C$	01	25250
2	Furnace $1000^0 C$	01	14280
3	Furnace $1400^0 C$	01	74500
4	Hot Plate	01	4135

5	Magnetic stirrer	01	1605
6	Agate mortar pestles	01	7220
7	Alumina boats	01	4950
8	Crucibles	01	1500
9	Hall effect set up	02	110800

10	G.M. Counter set up	02	52000
11	He-Ne Laser	02	22000
12	e/m Magnetron set up	01	24400
13	Resistivity by using Four probe set up	02	20600
14	Diode kit	04	19200

15	Transistor kit	04	20800
16	Newton's Rings set up	02	10200
17	Polarimeter	02	20000
18	Thermocouple	01	
19	Band gap measurement kit	02	16400

## 9. Doctoral Programme

The Department is conducting a Ph.D. programme in the following research areas

- Nanostructured Materials
- Nanostructures Ferrites, Garnet Materials
- Nanostructured CMR Materials.
- Carbon Nano Tubes

## 10. International Conference, National Conference, Invited Lectures and Workshops attended by Faculty members and Research Scholars

### A) Winter School / Summer School / QIP Short-term Course

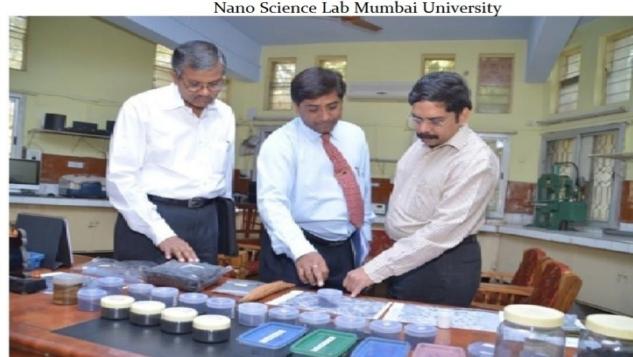
1. One week workshop on Outcome Based Education under TEQIP, Dr. BATU, Lonere, June 23-28 (2016)
2. One week CEP course on Mathematical Principles in Engineering, IIT Bombay, June 18 -22 (2016)
3. One week CEP course on Optimization in Design and Engineering, IIT Bombay, Nov 02-06 (2015)

### List of Ph.D. Students

S.N.	Name of student	Title of thesis	Status
1	Mrs. S.G. Dahotre	Study of Mn-Zn Ferrites at Nanolevel	Degree awarded
2	Mr. U.L. Shinde	Study of Transport and Magneto resistance in Nanomagnates	Degree awarded
3	Mr. K.D. Barhate	Development of electrode for hydrogen / oxygen fuel cell using carbon nanotube.	Degree awarded
4	Mrs. N.B. Srivastava	Mechanism of Transport and colossal Magneto resistance in Manganites	Degree awarded
5	Mr. Sandesh V. Jaybhaye	Hydrogen adsorption/desorption by carbon nanomaterials	Degree awarded
6	Mr. F.A. Ahmed	Study of nickel based Nanoferrites.	Ongoing
7	Mr. A.R. Bhalekar	Study of substituted YIG at nano level	Ongoing

University of Genova Italy, Dr. Sandesh Jaybhaye

102<sup>th</sup> Indian Science Congress-2015, Mumbai University.



## **Departmental Strengths, Weaknesses, Opportunities and Challenges**

### **Strengths**

- Highly dedicated and motivated faculty members.
- The curriculum design is a perfect blend of Physics for all Engineering branches.
- Research publications by faculty members.
- Well equipped labs for UG and Research Scholars.

### **Weaknesses**

- Departmental maintenance, etc: Most of the minor problems related to maintenance & installation are handled in the department itself. These problems are solved with the help of laboratory assistant and Department students. For major problem such as repairing of PC motherboards, trainer kits, UPS controller, test and measurements equipment Department does not have maintenance & repair facility. Some of the equipment and PCs are obsolete hence are required to be replaced by new equipment.
- Lack of adequate space for UG and Ph.D. Lab
- Faculty shortage: Presently faculty strength of the Department is two (01+01). As per the norm, faculty strength of the Department should be equal to 6. However, Department activities are carried out by appointing faculty on contract basis and also by appointing teaching assistants.

### **Opportunities**

- To start the M.Sc. / M.Tech. Programme in Physics and Material Science.
- To start the School of Material Science.
- To start B.Tech.in Engineering Physics.

### **Challenges**

- Managing all Departmental activities with the help of available faculty members.
- Recruitment of qualified faculty members having Ph.D. qualification
- Attracting good students for Ph.D. programmes.

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## **Department of English**



**Dr. A.P. Shesh  
Assistant Professor & Head**

### **Message from Head of Department:**

It gives me immense pleasure to present the Annual Report of the Department for the Academic Year 2015-2016. The main objective of the Department is to enhance the linguistic abilities of the students of engineering to cater the needs of the industry. The department has a well-equipped Language Laboratory which is continuously upgraded considering the need of the time. The faculty members from the department also guide the students to prepare tests like GRE and TOEFL. The department focuses on the overall development of the students in order to make them good human beings in future so that they would be aware about their duties towards the society and the nation. The department has taken initiative to establish a students' forum En'ggoy group that conducts different activities for the students of engineering. Students and faculty members from the engineering departments are also involved in this group.

**Dr. A. P. Shesh**

**Vision:** To impart the linguistic proficiency to the students of engineering and technology in order to make them world leaders.

**Mission:** The Department aims to develop the students as the industry professionals with discipline and skills required to play the role of a good citizen. It also aims to establish links with other institutions and industry for the enhancement of knowledge skills.

#### **About the Department:**

The Department is established in the year 1989. The Department is committed to transform the scene of education in the area of English language. The staff members are also trying to implement different teaching-learning strategies for the actual experiences. It is also the endeavour of the Department to contribute the world of research due to which the department would be a major player in the world of education.

Since the inception, department is involved in curricular and extra-curricular activities at the University. The Department of English offers courses entitled ‘Communication Skills’ for First Year students and ‘Basic Course in Human Rights’. The Department has established a Language Laboratory in the academic year 2005-2006 to set a very good example of teaching learning through the use of technology. It is observed that the learners are encouraged for acquisition of linguistic skills in a better way through the use of Language Laboratory in addition to the classroom instructions.

#### **Programme Educational Objectives (PEOs):**

- Give students understanding and knowledge of English language.
- To provide the students with sophisticated writing skills useful in academics as well as the outer world.
- Provide opportunities to explore identity, values, manners and ethics.
- Provide them exposure to four language learning skills Listening, Speaking, Reading and Writing.

#### **Programme Outcomes (POs):**

- The students will enhance their linguistic skills.
- They will have better ability to listen, speak, read and writing.
- The learners will develop the ability to write different pieces of academic writing.
- The learner will develop interpersonal skills.
- The learners will present themselves as good members of the society.
- The learners will develop themselves as a self-confident and able candidate.

#### **Faculty Profile:**



**Dr. A.P. Shesh**  
Assistant Professor  
M.A. (English), Ph.D.



**Mr. S.U. Kolekar**  
Assistant Professor (Contract Basis)  
M.A. (English, NET 03 times)

#### **Additional responsibilities to the Faculty:**

#### **Contribution to Academic or University Level Bodies:**

- Dr. A.P. Shesh is working as the member of Internal Quality Assurance Cell (IQAC) of Dr. B.A. T.U., Lonere from October-2011.
- Dr. A.P. Shesh is working as the member of the Annual Report Committee of Dr. B. A. T. U., Lonere.
- Dr. A.P. Shesh is working as the Member of Board of Studies for Sciences and Humanities at Dr. B.A. T.U., Lonere.
- Dr. A.P. Shesh is nominated as the member of Examination Panel at Rajarambapu Institute of Technology, Sakharale, Islampur since AY 2005-2006.

#### **Paper(s) Presented:**

- Dr. A.P. Shesh, ‘Gerald Vizenor’s Dead Voices: A Reflection of Tradition Myths and Liberation in Native American World’ at International Conference on Fourth World Literature & Culture at Pune
- Dr. A.P. Shesh, ‘Rituals in Cogewea’, New Trends in Humanities, Gender and Cultural Studies at N.G. Acharya & D.K. Marathe College of Arts, Science & Commerce Chembur, Mumbai.

**Papers Published:**

- Dr. A.P. Shesh, "Use of Trickster in Gerald Vizenor's Fiction" published in Labyrinth: The International Literary Journal of Postmodernism" Vol. 4 No. 4

**Expert Lectures delivered:**

- Delivered expert lecture on Stress Management and Presentation Skills at Saraswati College of Engineering, Kharghar, Navi Mumbai.
- Delivered expert lectures at the training programmes for the lab technicians and class-IV employees at Dr. Babasaheb Ambedkar Technological University, Lonere.
- Delivered expert lecture on 'Postmodernism' at Mahatma Gandhi Mahavidyalaya, Ahmadpur Dist. Latur for UG and PG students
- Delivered a lecture on Challenges in Learning English at FDP at Dr. B.A. T.U., Lonere.
- Conducted a workshop for NCC Cadets to prepare them for the examinations like CDS, SSC.

**Memberships of Literary Organization/Forums:**

- Life member of **Indian Association for American Studies**
- Life member of **MELUS-MELOW India**

**Plan of Action:**

More interactive teaching and internal assessment. Department wants to undertake research in English Literature and ELT. We would like to introduce training in different foreign languages which would be useful for the students for employment.



# Library

## **Introduction:**

The Library plays an important role in supporting the academic program of the University. It is an integral part of the educational process in the University Campus. It is established immediately after the establishment of the University in 1989. The Library helps the teachers, students, researcher to explore updated and latest information related to their field of interest. It also helps them to get information through different media that can be useful for them for writing their research paper, dissertation thesis etc. The existing Library occupies spacious area about 21000 sq. feet. The Library has rich collection of 95000 books. The Library is having open access. The Library collection includes Textbooks, Reference books, Handbooks, Encyclopedias, Back volume of periodicals. Collected works of Dr. Babasaheb Ambedkar, Mahatma Gandhi and other important personalities are also available in Library, Light reading magazine, Novels and Story books in Hindi, Marathi, English literature etc are also available.. The Library functions between 9.30 AM and 5.30 PM on working days. The Library hours are extended during the time of final examinations. Apart from the books, Library subscribe Indian and foreign journals/Periodicals and Newspaper. The entire Library book collection is classified according to the **DDC**. (Dewey Decimal Classification) The Library is partially computerized with the help of **LIBMAN** (Library Software).The circulation transaction, Barcode generation, No dues certificates, Reminder etc. work is carried out with the help of this software. The total investment on the Library since its inception is around **Rs. Six Crore**.

## **Library Committee:**

The function of the Library committee is to administer, to organize to maintain and support the University Library, so that it can facilitate the Library development plan. The Hon. Vice-Chancellor is the Chairman of the committee. The tenure of this committee is of Three year. The committee meets at least twice a year.

## **Book Bank:**

The Book Bank consists of prescribed textbooks for undergraduate courses. Textbooks recommended by the concerned faculty members for different courses are kept in the book bank section. These textbooks can be loaned out for the semester to all the students as per the schedule announce by the Library at the beginning of the semester. The borrowers have to pay 15% of the total cost of the books, as a rental charges per semester, which is not refundable. The University Library has strong book bank collection, which caters the need of all undergraduate students. Books from the Book-Bank will be issued at the beginning of the each semester. Students have to return the books at the end of the semester. Total number of books available in the book bank section is 43911 the 2223 books worth Rs. 774840/-have been added during the reporting year. The 4922 students (including diploma, degree and post graduate students) have availed the book bank facility during the reporting year. The revenue worth Rs.669428/- have been collected from the students against the book bank charges. The 18287 books issued to the student from the book bank section.

## **Book Bank: (SC/ST) collection:**

Library also runs book bank (SC/ST Collection) scheme sponsored by the Govt. of Maharashtra, for economically weaker sections of the society and the reserve category students. Selected books are made available to the students belonging to SC/ST community for a semester. The issue of the books from this collection is at the beginning of every semester. Books are to be returned at the end of the semester. This facility is provided to the SC/ST student free of cost. Special grant worth Rs. 267000/-received from the Project Officer, Social Welfare Department, Govt. of Maharashtra for the year 2013-14 for purchasing the books for ST students.

**Internet services:** University Library is provided internet facility to all its users for searching online journals and other document. Library has separate computer section around 20 computers are made available with internet connectivity for students for accessing online journals and e-books.

**UGC Infonet services:** Library is part of UGC-INFONET program of UGC. Based on the agreement signed with INFLIBNET centre, Ahmadabad, Library received following e-resources through the e-consortia of INFLIBNET.

Apart from the UGC- INFONET Product, the Library has subscribed IEL on-line which is a Mandatory requirement for Engineering Institution. We have paid worth Rs. 21, 49,775/- against its subscription.

### IEEE IEL Growth Plan (Multi user)

S.N.	Resource Names	Resource URL	No of Journal
1	American Chemical Society	http://pubs.acs.org/	37
2	Cambridge University Press	http://journals.cambridge.org/	224
3	Economic & Political Weekly	http://epw.in/	1
4	ISID	http://isid.org.in/	Database
5	JCCC	http://jgateplus.com/	Database
6	Springer Link	http://link.springer.com/	1389+
7	Taylor & Francis	http://www.tandfonline.com	1079
8	Wiley - Blackwell		908

- A. Library Automation (UGC) : **8,15,000/-**  
 B. ST Book-Bank from Prakalp Adhikari Pen Raigad,  
     Year 2012-13, Sanctioned Amount Rs.**2,67,000/-**  
 C. SC/ST Book-Bank from Samajkalyan Alibag-Raigad,  
     Year 2014-15, Sanctioned Amount Rs. **9, 22,000/-**

### Books Expenditure 2015-16 (A) Library Books

Year	Acc. No		Total Copies Added	Fund		Total Amount
	Start	End		UGC	TEQIP-II	
<b>2015-16</b>	37109	38273	1165	10,93,451/-	9,32,695/-	<b>20,26,146/-</b>

### (B) Book-Bank Books

Year	Acc. No		Total Copies Added	Total Title Added	Fund	Total Amount
	Start	End				
<b>2015-16</b>	45483	46195	713	21	Book-Bank	<b>4,36,558/-</b>

### (C) ST Book Bank

Year	Acc. No		Total Copies Added	Total Title Added	Fund	Total Amount
	Start	End				
<b>2015-16</b>	4378	5897	1519	155	Sc-St Bb	<b>6,54,752/-</b>

### (D) ST Book Bank

Year	Acc. No		Total Copies Added	Total Title Added	Fund	Total Amount
	Start	End				
<b>2015-16</b>	307	584	278	49	St Bb	<b>1,20,009/-</b>

**Library Expenditure on Periodicals 2015-16 = Rs.347946/-**

Foreign: **2,67,641/-**

Indian: **22,944/-**

Other Magazine: **57,361/-**

**Expenditure on E Journals2015-16**

IEL Growth Plan 2015-16 - **Rs.21,49,775.00/-**

### List of the existing periodicals

Periodicals /Journals/ Educational Magazine:

S.N.	Name of Periodical	S.N.	Name of Periodical
1	ACE Update Magazine	18	Journal of Structural Engineering
2	ACI Concrete International	19	Mechanical Engineering.
3	ACI Structural Engineering	20	MIT Technology Review
4	ACM Computing Surveys	21	National Geography - US

5	ACM Trans on Software & Methodology	22	OEM Update Magazine
6	American Scientist - US	23	Offshore
7	B2B Purchase Magazine	24	Oil & Gas Journal
8	Chemical Engineering Education	25	Popular Mechanics - US
9	Chemical Engineering Progress	26	Popular Science - US
10	Civil Engineering Magazine	27	Scientific American - US
11	Construction Technology	28	Time
12	Construction Week	29	India Power
13	Construction World	30	Electrical India
14	EPR Electrical Power Review Magazine	31	Chemical Engineering World
15	Hydrocarbon Processing	32	Lighting India
16	Indian Highway	33	Cooling India
17	JLC Journal of Light Construction		

#### Other Magazines/Periodicals

S.N.	Name of Magazine	S.N.	Name of Magazine
1	All Indian Management	32	Overdrive
2	Auto Component India	33	PC Quest
3	Auto car India	34	Physics for You
4	Business India	35	Popular Science - India
5	Business Today	36	Pratiyogita Darpan
6	Business World	37	Pratiyogita Kiran
7	Bulletin Unique Academy	38	Reader Digest
8	Chanakya Mandal	39	Saptahik Sakal
9	Chemistry Today	40	Science Refresher
10	Chronicle	41	Science Reporter
11	Competition Refresher	42	Spardha Pariksha
12	Competition Success Review	43	Tell Me Why
13	Competition Wizard	44	The Caravan
14	Digit	45	The Week
15	Economic Times Magazine	46	Top Gear
16	Economic Times Wealth	47	Udyojak
17	Electronics For You	48	Yojana (Marathi)
18	Employment News	49	Data Quest
19	Engineering Success Review	50	Sport Star
20	Express Computer	51	Power Watch
21	Frontline	52	CAR India
22	General Knowledge / G.K	53	Outlook Traveler
23	India Forbes	54	CV Commercial Vehicle
24	India Today	55	Motoring World
25	Inside Outside	56	What Hi Fi ?
26	Kurushetra	57	Electronics Bazar
27	Lokprabha	58	Voice & Data
28	Lokrajya	59	Lonely Planet
29	Mathematics Today	60	BBC Knowledge
30	My Mobile	61	Open Source For You
31	Outlook		

#### Library at a Glance

Library Books	: 38273
Book-Bank Books	: 46195
Book-Bank (IoPE)	: 3812
SC/ST Collection	: 5897
ST Collection	: 278

Number of Single Title	: 24035
Number of Reference Books	: 4648
Built-up Area of Library	: 25000 sq. ft.
Number of Library Staff	: 05

During Working Day	: 09.30am To 5.45 pm
Number of Seats in Reading Space	: 300
Number of Registered Users	: 5090
Number of Users per Day	: 310
Software Use	: Lib-Man (Introduced From June 2011)
Number of Periodical	: 93
International Periodicals	: 18
National Periodicals	: 15
Other Magazine	: 60
Online E-Journals	: IEEE & UGC Infonet 8 E-Resources
Bound Volumes	: 3237
Audio & Video Cassettes	: 481
Chemical Abstracts	: 1017
Video DVD's (Educational Materials):	27
Ph.D. Thesis	: 37
M.Tech. Dissertation	: 697
No of Newspapers	: 24

#### **Added in 2015-16**

S.N.	Material	Qty	Cost in Rs
01	Xerox-cum-Printer - MP2014	01	47,197.00
02	Xerox-cum-Printer - MP2001L	01	71,820.00
03	Printer - SP210 SU	02	18,454.00

#### **Library Staff**

S.N.	Name	Qualification	Designation
1	Mr. S. P. Vaidya	B.Sc. M.Lib.Sc., M.Phil., PGDLAN	Librarian
2	Mr. A. R. Palkar	M.Lib. & Info.Sci.	Assistant Librarian
3	Mr. M. A. Bhingare	B.A.	Clerk cum typist
4	Mr. M. R. Naik	10 <sup>th</sup> Pass	Peon
5	Mr. M. K. Korpe	5 <sup>th</sup> Pass	Peon

\* \* \*



## NCC UNIT DBATU REPORT 2015-2016

NCC Unit of Dr. Babasaheb Ambedkar Technological University, Lonere has organized several social and cultural activities/events this year. Cadets have performed and participated in the activities reported here under the supervision of Capt. Milind P. Bhagat.

### 1) International Yoga Day 2015

International Yoga Day was celebrated with great enthusiasm in our University on 21<sup>st</sup> June, 2015 which was organized by our NCC Unit. More than 400 cadets participated for this International Yoga event. Our University Registrar, Dr. Vikas Sargade, has inaugurated the function and addressed the gathering. Dr. Madhukar Dabhade, Principal, IoPE, Lonere, Capt. Milind Bhagat, ANO, DBATU NCC Unit and other units ANOs of 6 MH BN NCC were present. The PI of Goregaon Police Station Mrs. Nisha Jadhav with her staff, Medical Officer of Goregaon PHC, Dr. Sunil K Palhal along with his team and ambulance also attended the programme.



**2) Disabled People Survey:** Survey of disabled people in nearby areas was conducted on 23<sup>rd</sup> July, 2015 by our NCC Unit. The needs as well as lifestyle of those people were studied and understood by our cadets discovering a new approach to their lives.

**3) Independence Day 2015:** Our cadets participated in the Independence Day Parade on 15<sup>th</sup> August, 2015

**4) SSB Training Workshop:** 1) SSB Training Workshop was organized in University for students in the month of September. Dr. Amit Shesh, Head, Dept. of English delivered lectures dealing with Personality Development, Language barriers and Fluency in English for the preparation of SSB.

2) SSB Training Lectures: Lecture dealing with SSB Selection Procedure was delivered by Col. Ganesh Babu.



**5) Cleaning Survey at Mangrul Village:** On 20<sup>th</sup> October, 2015 cadets conducted a cleanliness drive at Mangrul village which is adopted by our NCC Unit of our University. Cadets cleaned the place very efficiently.



**6) National Integration Day:** National Integration Day was celebrated with great enthusiasm on 31<sup>st</sup> October, 2015 in remembrance of Vallabhbhai Patel. Essay Competition along with Speech Competition, Poster Competition and Street Play was presented by cadets.

**7) Army Day /Kargil Day:** Cadets paid homage on 15 January, 2016 on the occasion of Army day to deal the soldiers martyrs who sacrificed their lives during Kargil War.

**8) Republic day 2016:** On the auspicious moment of 26 January, 2016, Republic Day, our DBATU NCC Unit celebrates Republic Day. Honorable Chief guest Dr. P.V. Vijaya Babu Sir, HOD of Chemical Engineering, hoisted the National Flag at IOPE ground in the morning. With a great zeal, our NCC unit marched saluting the Flag. Rifle dairies gave royal Salami to the flag which was followed by the National Anthem. Later on Hon. Chief Guest of the program addressed to the gathering. All teaching as well as non-teaching staff of our University was present on the occasion. Our NSS group carried out a breathtaking cultural program along with the traditional Lezim. A street play was organized to motivate the crowd on the topic of organ donation. NCC cadets performed a martial art event showing the strength and courage of our NCC Unit. We have also collected fund from the crowd to help orphans and mentally disabled people at this occasion. Little students from an orphanage have joined us and surprised whole crowd with their innocent activities on stage. The program ended with the NCC song.

**9) Cycle Expedition at Raigad Fort:** On 31<sup>st</sup> January, 2016, our NCC Unit has organized a cycle expedition at Raigad fort. Active cadets of our Unit participated in it. Total 10 cadets went to the Raigad Fort on their bicycles.

**10) Run for ‘Spirit of India’:** Our Cadets joined the Australian former MP and tourism minister, Mr. Pat Farmeron his run for his social act named as Spirit of India. Cadets ran with the team up to 25 km from Lonere.



**11) Firing Competition:** On 12<sup>th</sup> March, 2016, the DBATU NCC Unit has organized a firing competition at Mangrul Hill behind the Campus of our University. Total 58 cadets participated in the competition with great enthusiasm. Everyone has learnt different positions of firing from the respective seniors present. Cadets had been taught to load a rifle and fire it on the target. At the end of competition winners were awarded prizes.



**12) Raigad Trekking:** On 20<sup>th</sup> March, 2016, DBATU NCC Unit organized an adventurous trekking to the Raigad Fort, Capital of Chhatrapati Shivaji Maharaja Kingdom. The Trek started from our University up to the Raigad Fort. Cadets trekked through the various mountains of Sahyadri Ranges to crave out their way to Raigad Fort. A total of 45 cadets were present for the event. Not only NCC cadets but some other students of our University were also

allowed to join the cadets. The total distance covered in this trekking was more than 15 km. Cadets learned the way of adjusting with Natural resources and completed the Trek successfully.

**13) Convocation 2016:** On 6<sup>th</sup> April, 2016, Dr. Babasaheb Ambedkar Technological University arranged its 19<sup>th</sup> Convocation. All the students of previous pass out batch got a chance to take their degree certificate from the dignitaries present on stage. Hon. Chief Guest Padmabhushan Dr. Jeshtharaj Joshi, Former Director of ICT, Mumbai was present on the occasion. Chief Guest was welcomed by a Guard of honor. After the degree distribution, Cultural Festival, Abhiyanta Vasant of our University was organized. Our NCC cadets worked for the Discipline Committee.



**14) Snake Show:** Shri. Sadaf Kadvekar, Sarpmitra, from Chiplun, has visited our University to give us an informative lecture on Snakes. By looking over the confidence and courage of our NCC cadets, he taught us all the salient features about wide variety of snakes that he brought with him. Our cadets got an opportunity to hold the dangerous snakes and study their habitat. The objective of this programme was to create awareness among the students about the snakes so that we can maintain the ecosystem by preserving different types of snakes.

**15) Maharashtra Day 2016:** On the occasion of 1<sup>st</sup> May, 2016 DBATU NCC Unit celebrated Maharashtra Day. Hon. Vice-Chancellor of our University Prof. Vilas Gaikar, hoisted the National Flag on this Maharashtra day ceremony. Later on Chief Guest interacted with cadets and motivated them. At the end of ceremony Hon'ble Vice-Chancellor led the tree plantation program in the IoPE campus.



\* \* \*

# National Service Scheme



## Activities organized / participated by NSS in 2015-2016

1. Blood Donation and Thalassemia Screening drive (17<sup>th</sup> April 2015): Blood donation camp was organized on 17<sup>th</sup> April, 2015. The Drive was inaugurated by Hon. Vice-Chancellor of the University Dr. W. N. Gade. 326 units of blood was collected in the drive by the team of J. J. Hospital Mumbai. During the drive, blood samples of 348 first year B. Tech students were tested for thalassemia screening.
2. Help desk (2-5<sup>th</sup>& 15-18<sup>th</sup> June 2015): Help desk was arranged by NSS Students to help the first year B. Tech students in admission process. The students and their parents were helped and guided during the admission process.
3. Tree Plantation (5<sup>th</sup> June, 2015): Tree plantation drive was organized in the University. 75 saplings were planted in the University campus.
4. Quiz Competition (27<sup>th</sup> August, 2015): A Quiz was organized on 'Leadership and Personality development'. The quiz was organized by Swami Vivekananda Seva Samiti, Rishikesh, Uttarakhand. 125 volunteers of second year B. Tech students participated in the quiz.
5. Essay competition (29<sup>th</sup> September, 2015): Essay competition was organized on the theme 'Cultural declination and advancement in civilization' in English language. Whereas the topic in Marathi language was 'Dr. A. P. J. Kalam: A Scientist'.
6. Rangoli Competition (30<sup>th</sup> September, 2015): Rangoli competition was organized on the theme 'Save Nature - Save Life'. Twenty-two participants participated in the competition.
7. Quiz Competition (1<sup>st</sup> October, 2015): Quiz competition was organized on topic 'Dr. A. P. J. Kalam: Life and his work'. 56 students participated in the quiz.
8. Celebration of international day of Non-violence and Peace (2<sup>nd</sup> October 2015): Mahatma Gandhi Jayanti was celebrated by organizing cleanliness drive and one-hour program of bhajans and speeches by students on the topic from Non-violence to Humanity.
9. Cleanliness Drive (11<sup>th</sup> October, 2015): Cleanliness drive was organized in adopted village Nhavai under Swacchta Bharat Abhiyan. 250 volunteers participated in this drive.
10. Rashtriya Ekta Diwas (31<sup>st</sup> October, 2015): Birth anniversary of Sardar Vallabhbhai Patel was celebrated as "Rashtriya Ekta Diwas" on 31st October 2015. Activities such as Speeches by students, Rashtriya Ekta Pledge and Run for unity in the University campus were organized for celebration of this day.
11. Constitution Day Celebration (26<sup>th</sup> November, 2015): Constitution day was celebrated by reading preamble of the constitution. A lecture by Advocate Valmik Nikalge was organized on topic "Dr. Babasaheb Ambedkar and Indian Constitution" as part of the celebration of this day. Faculty members, staff and students attended Constitution Day celebration.
12. Raigad Mahotsav (22<sup>nd</sup>-24<sup>th</sup> January, 2016): Raigad Mahotsav was organized during April 22-24, 2015 by directorate of cultural affairs, Government of Maharashtra. To unfurl the history of Chatrapati Shivaji's reign, a variety of cultural and creative events were held in this Mohostav. Chief Minister of Maharashtra, Hon. Devendra Fadnavis inaugurated the event on Jan 21<sup>st</sup> 2016. 43 NSS volunteers of our University were involved in organization of Mahotsav.
13. Republic day celebration (26th January, 2016) Republic day was celebrated on 26th January 2016. NSS volunteers participated in republic day parade. As a part of celebration, cultural program was organized in which street plays on social issues, patriotic songs and dances were part of celebration.
14. NSS Annual camp (11th -17th March, 2016) Seven-day camp was organized in the University campus during March 11-17, 2016. 114 (64 M + 50 F) students participated in the camp. 150 meter bandhara was constructed for creating watershed for irrigating the plantation in University campus. Further, University participated in state level events such as Avhan-2016, Prerna Shibir-2016, and Utkarsh-2016.

## Sports

1. Participated in ZEST-2016 a National Level sports competition and won 07 gold medals and 01 Silver medal in CoEP, Pune.\
2. Participated in SUMMIT-2016 a National Level sports competition and won 02 Gold and 01 silver medal in MIT-Pune.
3. Organised University Sports competition URJA-16 in University campus.
4. Organised a Civil Defence course for all the teaching, non-teaching staff members and students. Total 134 members have completed the Civil Defence Camp.

★ ★ \*

# Celebration of 125<sup>th</sup> Ambedkar Jayanti

Every year the University organizes Dr. Babasaheb Ambedkar Memorial Lecture on 14<sup>th</sup> April. On this occasion several activities were organized by the University. Some of the activities are Essay Competition, Elocution Competition on life and works of Dr. Ambedkar, Rangoli Competition, Quiz Competition, Clay Modeling and Poetry Recital Competition. The students participated in all these competitions under the guidance of staff members of the University. The staff members co-ordinated all these events with enthusiasm. Total 15 students from B.Tech as well as diploma participated in the competition. The following topics were announced for the competition through wide publicity in the University and hostels of the University a week before the competition to be held.

- Dr. Babasaheb Ambedkar & His Contribution in Nation Building
- Dr. Babasaheb Ambedkar & His Contribution in Women Empowerment
- Dr. Babasaheb Ambedkar & Indian Constitution
- Dr. Babasaheb Ambedkar as Educationist
- Dr. Babasaheb Ambedkar & his Contribution in Social Equality

Apart from Dr. Babasaheb Ambedkar Memorial lecture several other functions like birth anniversaries of Mahatma Phule, Savitribai Phule were conducted in the University.



Elocution Competition



Savitribai Phule Jayanti



Savitribai Phule Jayanti



Constitution Day Celebration

# Institute of Petrochemical Engineering

Institute of Petrochemical Engineering a conducted institute of Dr. Babasaheb Ambedkar Technological University Lonere (formerly, Raigad Polytechnic) was established in the year 1982 with intake of 40 students in the Chemical Engineering Department. This was four years sandwich course. With the successive addition of courses year by year, today Institute runs eight diploma programmes and one post diploma program. Total intake is now 534 per year. Around 1412 students are studying in this institute out of which 529 are girls. Nearly 260 girls and 100 boys are accommodated in the hostels. Institute admitted 30 students in Advanced Diploma in Water Quality Management (ADWQM) program in this academic year. This is one year job oriented program conducted with the help of various water Industries such as M/s. Ion Exchange (India) Limited, Wipro Water and other water industries. Most of the students are seeking very good job offers from these industries.

**Placement Details:** This year Godrej and Boyce Vikroli Mumbai, M/s. Positive Packaging Pvt. Ltd., Khopoli, Wipro Waters Mumbai and L& T conducted campus recruitment process and selected 20 students.

## Community Development through Polytechnic Scheme (CDTP scheme):

This is Central Government (MHRD) scheme to train the rural youth, dropouts and women in various skills. This year institute trained around 737 persons in the various skills such as Garment Making, Basic Computer, Computer Hardware and Maintenance, Auto-Cad, Electrician, Tally etc. Special camps were arranged in rural areas to impart skills in decorative item making, purse/hand bags making etc. Expert lecture of doctor was arranged in tribal area of Raigad district on the topic of hygiene and health care. Our students of Electrical Engineering conducted a demonstrative camp of energy saving, electrical safety etc. for the rural people.

**Based on performance of Community Schemes, Institute got opportunity to represent India in the International conference on TVET skills development for poverty Alleviation, entrepreneurship and employability, held at Manila, Philippines, June 22-23, 2015**

- Institute successfully completed the energy efficiency Project sponsored by MEDA (Rs.25Lakh). Dr. Lingayat and his team coordinated this project.
- Institute received 8<sup>th</sup> India Power Award by Council of Power Utilities, New Delhi on November 2015 and 10<sup>th</sup> Energy Conservation Award by Maharashtra Energy Development Agency, Pune on February, 2016.
- Institute organized Digital India Week program. Poster presentation about digital India was arranged. Also, in rural area, awareness camp at VINHERE- Mahad was organized.
- Institute celebrated Women's Day 2016. Mrs. Nisha Jadhav Police Inspector Goregaon shared her views on Women safety. All the departments are regularly organizing Parent meet once in every semester.
- Campus Cleanliness drive under Swachha Bharat Mission was arranged at Institute.
- Prof. D.S. Karanjkar, Head of Instrumentation Engg. Department received Ph.D. Degree from Panjab University Chandigarh.
- Prof. D.G. Jadhav, Head of Electronics and Telecommunication Engineering Department received Ph.D. Degree from Panjab University, Chandigarh.
- One day workshop on PLC was arranged by Instrumentation Engineering department. Around 125 students participated in the workshop.
- One day workshop on DCS was arranged by Instrumentation Engineering department. 133 students (fifty students from other institute) participated in the workshop. Department also organized expert lectures on Automation and safety, industrial automation, employability skills development etc. Students took part in Mindspark 2K15 event of CoEP Pune.
- Industrial visit of Instrumentation Engineering students was arranged at M/s. Privi Organics Mahad.
- Students of Electronics and Telecommunication Engineering visited All India Radio, Ratnagiri.
- Student group of Electrical Engineering participated in students project competition held at Reliance Infrastructure at Dahanu Thermal Power station. The project "Energy conservation in educational institute" received First prize.
- Industrial Visit of Electrical Engineering students was arranged at Dahanu Thermal Power station, L & T Switchgear training center and JNPT Uran.

- Chemical Engineering Department organized expert lectures by Amit Salagare, Exxonobel, Mahad, Nitin Mhatre, RCF Chembur and Prof. Gorshetty, Marathwada University, Aurangabad.
- Chemical Engineering Department and Advanced Diploma in Water Quality Management course Celebrated World Water Day on 22<sup>nd</sup> March, 2016 to make students aware about water conservation.
- Computer department organized two days workshop on “Ethical Hacking”, two days workshop on “Android App. Development” and expert lectures on Hadoop and Big Data, Software Project Management.

### I. Community Development through Polytechnic (CDTP)

#### A. Skill Based Training:

S.N		No. of Persons Trained	No. of Persons Employed
1.	Males	373	149
2.	Females	364	102
	<b>Total</b>	<b>737</b>	<b>251</b>
	No. of villages covered	27	

#### B. Trades-wise Training/Employment Details:

S.N.	Name of the Trade	No. of Persons trained	No of Persons Employed
1.	Computer Fundamentals MS Office Internet (ICT101)	277	77
2.	Architectural & Civil 2D drafting with AutoCAD (ICT116)	142	38
3.	Computer Hardware & Networking (ICT105)	48	14
4.	Electrician (ELE101, ELE202, ELE203, ELE204, ELE209)	113	65
5.	Tally (ICT102)	87	26
6.	Garment Making (GAR105, GAR213)	70	31
	<b>Total</b>	<b>737</b>	<b>251</b>

#### Skill Development Training Programme Under CDTP Scheme

- Name of Training Programme : Electrician
- Duration of the Programme : 6 months (01-07-15 to 31-12-15)
- Number of Trainees : 19

#### Skill Development Training Programme Under CDTP Scheme

- Name of Training Programme : AutoCAD
- Duration of the Programme : 3 months (2-12-15 to 1-03-16)
- Number of Trainees : 11

#### Skill Development Training Programme Under CDTP Scheme

- Name of Training Programme : Tally
- Duration of the Programme : 3 months (14-05-15 to 13-08-15)
- Number of Trainees : 31



#### Skill Development Training Programme Under CDTP Scheme

- Name of Training Programme : Computer Fundamental MS Office and Internet
- Duration of the Programme : 3 months (12-08-15 to 10-11-15)
- Number of Trainees : 46

**Skill Development Training Programme Under CDTP Scheme**

- Name of Training Programme : **Computer Hardware and Networking**
- Duration of the Programme :**4 months (15-07-15 to 14-11-15)**
- Number of Trainees :**21**

**Skill Development Training Programme Under CDTP Scheme**

- Name of Training Programme : Computer Fundamental MS Office and Internet
- Duration of the Programme :**3 months (06-10-15 to 5-01-16)** Number of Trainees : **38**

**Skill Development Training Programme Under CDTP Scheme**

- Name of Training Programme : Computer Fundamentals, MS-Office and Internet
- Duration of the Programme :**3 months (21-08-15 to 20-11-15)**
- Number of Trainees :**24**

**Skill Development Training Programme Under CDTP Scheme**

- Name of Training Programme : Garment Making
- Duration of the Programme : **6 months (01-10-15 to 31-03-16)**
- Number of Trainees :**30**

**Employment Status of Students Who Took Training Under CDTP**

- Name of Student and Address: **Vishal Tukaram Nandgaonkar**
- Status of Employment: **Wage Employed**
- Details of Employment: **Working as an Technician**

**Employment Status of Students Who Took Training Under CDTP**

- Name of Student and Address: **Manoj Suresh Mahadik**, Name of the Trade: **Electrician**
- Status of Employment: **Self Employed**
- Details of Employment: **Working as an Electrician, Crane Operator**

**Employment Status of Students Who Took Training Under CDTP**

- Name of Student and Address: **Sham Uday Kadam**
- Name of the Trade: **Electrician** Duration : **6 months (10-09-2014 to 09-03-2015)**
- Status of Employment: **Wage Employed**
- Details of Employment: Working as an Electrician in **POSCO Maharashtra Steel**

**Employment Status of Students Who Took Training Under CDTP**

- Name of Student and Address: **Chetan Suresh Kadu**
- Details of Employment: **Working as an Electrician**

**Employment Status of Students Who Took Training Under CDTP**

- Name of Student and Address: **Alpesh Kashiram Gugale**
- Name of the Trade: **Electrician**
- Duration of Training: **6 months (14-09-2015 to 13-03-2016)**
- Status of Employment: Wage Employed
- Details of Employment: Working as an Electrician in **POSCO Maharashtra Steel**

**Employment Status of Students Who Took Training Under CDTP**

- Name of Student and Address: **Sayali Dayanand Dalvi**
- Duration of Training: **3 months (15-07-15 to 14-10-15)**
- Status of Employment: Wage Employed
- Details of Employment: **Trainer Under CDTP Scheme**

**Employment Status of Students who Took Training Under CDTP**

- Name of Student and Address: Akshata Yamaji Pawar
- Year of Training : **2015-2016** Name of the Trade: **Garment Making**
- Duration of Training: **6months (01-10-2015 to 31-3-2016)**
- Status of Employment : **Self Employed**

**Employment Status of Students who Took Training Under CDTP**

- Name of Student and Address: **Ronit Harichandra Gaikwad**

- Name of the Trade: **Tally (ERP9)** Duration: **3 months (14-05-15 to 13-8-15)**
- Status of Employment: **Wage Employed**
- Distance of Employment Place from the Polytechnic: **32Km**

#### **Employment Status of Students Who Took Training Under CDTP**

- Name of Student and Address: **Suchita Suresh Kasare, Nadgaon-Mahad**
- Name of the Trade: **Garment Making**
- Duration of Training: **6 months (03-01-2011 to 30-06-2011)**
- Status of Employment: **Self Employed**

#### **Employment Status of Students Who Took Training Under CDTP**

- Name of Student and Address: **Reshma Ganesh Kode, Patharshet-Kolad**
- Name of the Trade: **Garment Making** Duration: **6 months (1-10-2015-31-3-2016)**
- Status of Employment: **Self Employed**

#### **Employment Status of Students Who Took Training Under CDTP**

- Name of Student and Address: **Fizan Naeem Pardeshi**
- Year of Training: **2015-16** Name of the Trade: **Electrician**
- Duration of Training: **6 months (01/07/2015 to 31/12/2015)**
- Status of Employment : **Self Employed**

#### **Employment Status of Students Who Took Training Under CDTP**

- Name of Student and Address: **Rakesh Ramesh Shedge**
- Year of Training: **2015-16** Name of the Trade: **Electrician**
- Duration of Training: **6 Months (01/07/2015 to 31/12/2015)**
- Status of Employment : **Self Employed**

#### **Employment Status of Students Who Took Training Under CDTP**

- Name of Student and Address: **Ayyan Wanab Mulla**
- Year of Training: **2015-16** Name of the Trade: **Electrician**
- Duration of Training: **6 Months (01/07/2015 to 31/12/2015)**
- Status of Employment : **Self Employed**

#### **Employment Status of Students Who Took Training Under CDTP**

- Name of Student and Address: **Sagar Amar Kasare**
- Year of Training: **2015-16** Name of the Trade: **Electrician**
- Duration of Training: **6 Months (01/07/2015 to 31/12/2015)**
- Status of Employment : **Self Employed**

#### **Employment Status of Students Who Took Training Under CDTP**

- Name of Student and Address: **Sagar Sadanand**
- Name of the Trade: **Electrician** Duration of Training: **6 months**
- Status of Employment: Wage Employed





## DISSEMINATION AND APPLICATION OF APPROPRIATE TECHNOLOGY UNDER CDTP

1. Name of the Technology transferred: **Solar Water heater**

Date/Duration of Technology Transfer :**15-01-2015**

Solar Water Heater at the Hostel Alaknanda as shown in the following photographs

2. Name of the Technology transferred: **Energy Efficient Fans**

Date/Duration of Technology Transfer :**25-02-2015**

Energy Efficient Fans at the Hostel Alaknanda as shown in the following photographs. Electricity Bill of the Hostel is reduced by Rs. 15000/- per month.



3. Type of Technical Support Service : Purse making  
 Date/Duration of Support Service : 10-02-16

Details about the activity carried out: Work shop on purse making is organized for the rural women in Patharshet. Around 35 womens were trained. An exhibition of the various items prepared was arranged in the institute.



#### Awareness Programmes under CDTP Scheme

- Name of Awareness Programme : Career Guidance, General Awareness Lecture for Ashramshala Students
- Date/Duration of Awareness Programme :15-1-2016

About 45 school children from Adivasi Ashramshala, Mangaon visited to CDTP main center on January 15, 2016 along with their teachers. Carrier Guidance and General Awareness Lectures were delivered by Dr. M. A. Dabhade, Principal and Chief Co-ordinator, Dr. N. S. Lingayat, Head, Electrical Engineering Department and Internal Co-ordinator, Dr. B. C. Kharbas, EED Faculty and Mrs. Dipika Shet. A visit to the Central Library, laboratories and workshop is also organized to create awareness among the students.



## Awareness Programmes under CDTP Scheme

Name of Awareness Programme: Women Security and Cyber Crime

Date/Duration of Awareness Programme : 08-03-16

Women Safety program was arranged on 8<sup>th</sup> March 2016 from 12.30 PM to 5.00PM at Institute of Petrochemical Engineering auditorium. Mrs. Nisha Jadhav, Inspector of Police of Goregaon Police Station delivered speech on women's security and women rights. She also gave information about the cyber crime and disadvantages of using android mobiles. Mrs. Jadhav interacted with the women and answered their questions.



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## Electrical Engineering Department

### A. Departmental Activities:

S.N.	Activity	Date	Remarks	Co-coordinator
1	Teacher's Day	05/09/2015	Celebrated by students of the department	Prof. S. S. Shet Prof. U. A. Kharat
2	Engineer's Day celebration	15/09/2015	Expert Lecture on Automation by Mr. Kiran Patil	Dr. N. S. Lingayat Prof. U. A. Kharat
3	Guest Lecture on Energy Auditing tool to increase Energy Efficiency	30/09/2015	Mr. A. Y. Mehandale, Enrich Consultants, Pune	Dr. N. S. Lingayat
4	PCB workshop	23/10/2015	Mr. Prathmesh Pawar	Prof. D. S. Shet
5	Industrial Visit	23/10/2015	ITI Nandavi. All second year students participated.	Prof. M. B. Mudholkar
6	Parents Meet	31/10/2015	62 parents were attended the meeting	All faculty members
7	Energy Day celebration	14/12/2015	25 students participated in street play on energy conservation in 4 villages namely Mahad (2), Poladpur, Nate.	Dr. N. S. Lingayat
8	Industrial Visit	29/12/2015	Dahanu Thermal Power Station, Dahanu.	Dr. N. S. Lingayat Prof. D. S. Shet
9	Industry-Institute Joint Project	31/12/ 2015	EMBIO Ltd, Mahad, 08 Students have completed A Project at EMBIO Ltd Mahad, on " An Efficient Utilization of Electrical Energy in Medium Scale Chemical Industry: A Case Study"	Under Guidance of Dr. B. C. Kharbas and Engineer- Shivaji Mande
10	Guest Lecture on MD Controller	28/01/2016	Mr. Shivaji Mande, EMBIO, Mahad	Dr. N. S. Lingayat
11	3 day workshop on Employability skill Development	05/02/2016	Conducted by Swades Foundation, Lonere	Prof. U. A. Kharat Prof. D. S .Shet
12	Guest Lecture on Career Guidance	06/04/2016	Mr. Ashish Sawant	Prof. D. S. Shet
13	Industrial Visit	13/04/2016	JNPT Uran.	Dr. N. S. Lingayat Prof. D. S. Shet
14	Poster Competition on Energy Conservation	13/01/2016	07 students of the Institute have participated.	Energy Club All Staff

15	New facilities created			
a)	LCD Multimedia projector	Sept 2015	Through CDTP Scheme	Dr. N. S. Lingayat
b)	Single Phase Multi-function meters for the energy analysis of the various appliances.	June 2015	Through MEDA Project	Dr. N. S. Lingayat
c)	Designed & Development of New set up Experiments along with Laboratory Manuals For subject Switchgear and Protection	January 2015-April 2016		Dr. B. C. Kharbas
d)	CRO	Sept 2015	Through Institute Funds	Prof. D. S. Shet
e)	Design and Fabrication of a model for conducting practical's (IDC)	January 2015-April 2016		Prof. D. S .Shet

#### B. Students Achievements

1. A group of five students participated in the “Avishkar Project Exhibition -2016” organized by Zeal College of Engineering and Research, Pune on 10<sup>th</sup> March, 2016.
2. A group of three students participated in quiz competition organized during the “Mindspark” at COEP, Pune.
3. A group of three students participated in treasure hunt competition organized during the “Mindspark” at COEP, Pune.
4. A group of six students participated and secured First position in the “Energy Conservation Project Competition” during energy conservation week December 2015 held at DTPS, Reliance Infrastructure Limited, Dahanu.
5. Two students secured first and third positions in the “Poster Presentation Competition” held on 13<sup>th</sup> January, 2016 at the institute in the “Energy Conservation” theme.
6. A group of twenty two students participated in the celebration of “Energy Conservation Day” held on 14<sup>th</sup> December, 2015 at the institute.
7. A group three students participated in the maze runner event held during the “Cynosure” in March 2016 at DBATU, Lonere.
8. A group two students participated in the CSI (Crime Scene Investigation) event held during the “Cynosure” in March 2016 at DBATU, Lonere.
9. A group eight students have successfully completed A Project at EMBIO Ltd Mahad, on “An Efficient Utilization of Electrical Energy in Medium Scale Chemical Industry: A Case Study”.
10. A group of 9 Students successfully completed Electrical Energy Audit of Institute and hostels of the University and Institute.
11. A group of 3 students successfully completed Electrical Energy Audit of the village Panhalghar.
12. One group of the students successfully designed and fabricated an experimental set up for conducting the practicals of the subject Industrial Drives and Control.
13. Miss. Minal M. Patil worked as Hostel Secretary of Hostel Alaknanda. Her work has been appreciated.
14. Four Girls of the department won prizes in Poster making competition on “Food Wastages” organized by Alaknanda hostel.
15. Most of Electrical; Engineering Girls worked as Committee members of various hostel activities
16. The department students actively participated in the various sport events and won various prizes during the annual sports festival.
17. The department students actively participated in the various cultural events and won various prizes during the annual cultural festival.

#### C. Faculty Achievements

##### Dr. N. S. Lingayat

- Represented India and Presented a paper titled, “Training of the Deprived Rural Youth and Adivasi Women of Raigad District of Maharashtra State (India) for Self and Wage Employment” in the International Conference on TVET Skills Development for Poverty Alleviation, Entrepreneurship, and Employability, June 22-23, 2015, Manila, Philippines.
- Attended International Training Program on “Entrepreneurship in TVET skills development”, organized by Colombo Plan Staff College, Manila, Philippines in June 17-20, 2015.
- Successfully implemented the Energy Efficiency Project sponsored by MEDA. Electricity bill amount of Rs. 5.9 Lac has been saved in the year 2015-16.

**The project has received following awards:**

- A. 8<sup>th</sup> India Power Award by Council of Power Utilities, New Delhi on Nov 6, 2015.
- B. 10<sup>th</sup> Energy Conservation Award by Maharashtra Energy Development Agency Pune, Government of Maharashtra, on February 18, 2016.
- C. Reliance Infrastructure, Dahanu.
- Attended one week training program on, "Management of CDTP Scheme for Maharashtra State" at NITTTR Bhopal Extension Center, Pune in June 8-12, 2015.
- Successful implementation of CDTP Scheme: Conducted various skill based training programs for the rural deprived youth of the Raigad district and trained around 737 rural youths in this financial year 2015-16. Successfully carried out other activities of the CDTP scheme.
- Successfully completed practical project of Energy Audit of IoPE campus, boys and girls hostels of the University, and the village 'Panhalghar' through the final year students of Electrical Engineering.
- Worked as a reviewer for the reputed International Journals.
- Ph. D supervisor of Pacific University, Udaipur and Dr. B.A.T.U., Lonere.
- Evaluated M. E. Thesis of J. N. Vyas University, Jodhpur and conducted viva-voce examination on March 31, 2015.
- Carried out the Electrical Maintenance Activities of the Institute and Hostel Alknanda.
- Celebrated Energy Conservation Day on 14<sup>th</sup> December 2015. Final year students performed street play on Energy Conservation at two locations of the village Mahad, village Poladpur and Nate. The Maharashtra State Electricity Distribution Company Ltd. (MSEDCL) sold LED bulb to the villagers at the discounted prize.
- Arranged Industrial Visit of the Students at Dahanu Thermal Power Station Dahanu.
- Worked as a judge in "IGNITE" on 5<sup>th</sup> March, 2016 held at DBATU, Lonere.
- Shouldered other responsibility given by Dr. B.A. T. U. Lonere and the Institute time to time.
- Worked as a member of the Admission Committee for direct second year diploma admissions.
- Life Member of
  - A. Institution of Engineers (I)
  - B. Indian Society for Technical Education
  - C. International Association of Engineers

**Dr. B. C. Kharbas**

- Research work, Title: "Some Investigation on Transmission Cost Allocations and Enhanced Revenue Reconciliation in Open Access of Transmission Network" Stream: Transmission Pricing (Electrical Power Systems)
- The research work was awarded "Power System POSOCO Award 2016 (PPSA 16)." He presented his research work at PGCIL New Delhi on February 22, 2016.
- Member IEEE USA.
- Ph. D. supervisor of Dr. Babasaheb Ambedkar Technological University.
- Reviewer of SCI ranked Electrical Engineering International Journals (Electrical Power Components and Systems, American Journal of Electrical and Power Engineering, Electrical Power Research, Energy Technology and Policy)
- Editor of American Journal of Electrical and Power Engineering
- Worked as a resource person for one week STTP on "Recent Trends in Energy Research" from 7<sup>th</sup>-11<sup>th</sup> December, 2015 at DBATU, Lonere.
- Working as Rector, Hostel Alknanda of the University. Developed and maintained entire transparent and students managed mess and hostel activities. This finally resulted in huge reduction in the expenses in mess and hostel expenditure.
- Added multiple facilities in the Hostel Alknanda like CCTV, Vending Machines, Mess Utensils, and Maintenance work of Hostel.
- Adopted process of write off of old and damaged items in the hostel. Dead stock verification etc.
- Arranged various competitions like poster making on "Food Wastages", Elocution Competitions etc. for students residing in the Hostel.
- Continuously taking follow up of doing maintenance of Hostel Buildings & Other Facilities with Authorities.
- Worked as Member of Dr. Babasaheb Ambedkar 125<sup>th</sup> Birthday Celebration Programme Committee.
- Worked in various activities of Institute and University like, Jayanti Program Celebrations as per government resolution, member of various activities of University.
- Worked for admission activities of Institute.
- Worked as a judge in "IGNITE" on 5<sup>th</sup> March, 2016 held at DBATU, Lonere.

**Prof. U. A. Kharat**

- Assisted in conduct of Poster Presentation Competition on the occasion of Energy Conservation day.
- Co-ordinated a group of students to present the project at the DTPS, Reliance Infrastructure Limited, Dahanu.
- Class teacher of the current first year Electrical Engineering class.
- Worked in the first year and the direct second year admission process.
- Worked as a marshal for the convocation.
- Worked in a committee of the Ambedkar Jayanti celebration.

**Prof. (Mrs.) D. S. Shet**

- Worked as a Secretary of Alumni Association of IoPE. The highest number of Lifetime membership (30) of IoPE Alumni Association by the Electrical Alumni.
- Procured I-card printing machinery and printed Identity cards of all the first year students and new faculty members through the Alumni Association.
- Actively involved in academic and other activities of the Institute and University.
- Working as Assistant Rector of Hostel Dhavalgiri of the University and significantly contributed to the regular and development activities of the Hostel.
- Major contribution in record keeping/data uploading/students activities and academic activities of the department.
- Shouldered other responsibility given by Dr. B.A. T. U. Lonere and the Institute time to time.
- Worked as a member of the Admission Committee for the second/third year diploma admissions.
- Active part in organizing Women's Day for all the girls of the Institute.

**Result Analysis**

Year	Total Student Appeared for Exam	Total Student Passed	Percentage of Passing Result (%)
First Year	64	29	45
Second Year	70	31	45.28
Third Year	59	51	86.4

**Important Photographs**

Participation certificate of Dr. N. S. Lingayat in regional program on "Entrepreneurship in TVET skills development", organised by Colombo Plan Staff College, Manila, Philippines in June 2015.



Country Presentation Certificate at the International Conference on "TVET Skills Development for Poverty Alleviation" organised by Colombo Plan Staff College, Manila, Philippines in June 2015.



### Implementation of Energy Efficiency Pilot Project Sponsored By Maharashtra Energy Development Agency



This Energy Conservation Project Received 8<sup>th</sup> India Power Award by Council of Power Utilities, N. Delhi under the category, "Dedicated Program for Energy Conservation" on 6<sup>th</sup> November 2015 Dr. N. S. Lingayat, Project Co-ordinator received the award.

Certificate of 10<sup>th</sup> State Level Energy Conservation Award (II Prize in Govt. Building Category) Dr. N. S. Lingayat, Project Co-ordinator received the award

### Industrial Visit of Final Year Students to JNPT URAN on 13/04/2016



**PCB workshop on 23/10/2015**

**Industrial Visit Dahanu Thermal Power Station 29-12-2015**



# Department of Information Technology

Department has been started in the year-2001 **Intake- 60**

- 1. Course Offered:** Diploma in Information Technology
- 2. Faculty Members:**

Name	Designation	Academic Qualification	Specialization	Areas of Interest
Mr. S.M. Gaikwad	Dept in-charge	B.E. M.Tech.	Electronics Engg.	Image Processing, Neural Network.
Mr. S.S. Gandhi	Lecturer (contract Basis)	B.E. M.Tech.	Computer Engg.	Software architecture, software engineering
Mr. G.P. Lad	Lecturer (contract Basis)	B.E. M.Tech.	Computer Engg.	Software architecture, software engineering
Mr. P.M. Hanpude	Lecturer (contract Basis)	B.E. M.Tech.	Computer Engg.	Networking, Cloud Computing.
Mr. S.S. Umbarkar	Lecturer	B.E. M.Tech.	Computer Engg.	Data mining, NLP

- 3. List of major equipment and other facilities:**

S.N.	Name of Major Equipment/Facility	Cost (In Rs.)
01	Programming Lab-Desktop HP DX 7200(25 No)	10,87,500/-
02	Online UPS system, aplab make 5kVA , Battery - ES 18/12 battery stand 2/8 CB with links set, Transformer(inbuilt)	1,36,500/-

- 4. Conference/Workshops/Training/Academic Awareness activities conducted:**

- a) Conducted workshop for Third Year student on “Employability Skills Development” during 5<sup>th</sup>-7<sup>th</sup> February, 2016.
- b) Organized Technical Poster Exhibition on Digital India theme (15<sup>th</sup> September, 2015).
- c) Organized Industrial tour to Airtel BPO Swadesh foundation Lonere on 16 January, 2016. .
- d) Organized two days workshop on PHP.

## RESULT ANALYSIS

Year	Total Student Appeared	Total Student Passed	Percentage of Passing Result (%)
First Year	66	56	84.84
Second Year	54	48	88.88
Third Year	57	57	100

- 5. Academic Achievements of faculty (Awards received, lectures delivered, etc.):**

1. Prof. S.S. Gandhi received Gold Medal in M.Tech (Computer Engg.) from Dr. B.A.T.U., Lonere.
2. Prof. S.S. Gandhi received M.Tech degree in Computer Engg. from Dr. B.A.T.U., Lonere.
3. Prof. P.M. Hanpude received M.Tech degree in Computer Engg. from Dr. B.A.T.U., Lonere.
4. Prof. G.P. Lad received M.Tech degree in Computer Engg. From Dr. B.A.T.U., Lonere.
5. Prof. S.S. Umbarkar received M.E. degree in Computer Engg. from Savitribai Phule, Pune University.

- 6. Major Students' Achievements**

1. Omkar Telange and Dhiraj Andhere participated in Quiz competition held at Thakur Polytechnic Mumbai.
2. Samikshya Shirshivkar won silver medal in Solo Dance Competition in annual gathering 2015-16.
3. Siddhesh Surve & Group won gold medal in Group Dance competition in annual gathering 2015-16.

## Departmental Activities Organized:

### Engineers' Day & Poster Exhibition

Department level Technical Poster exhibition was organised on the occasion of Engineers' day (15<sup>th</sup> Sept., 2015). Around 30 students participated & presented poster in the exhibition on topics like Digital locker,

National Scholarships Portal. The program presided over by Principal of institute Dr. M.A. Dabhade with very informative & encouraging speech on Bharat Ratna Mokshagundam Visvesvaraya.



### **Engineers' Day Celebration & Poster Exhibition**

#### **Industrial tour at Airtel BPO, Lonere**

Students from Department of Information Technology visited Airtel BPO, founded by Swades Foundation which aims to develop rural areas. The purpose of this visit was to understand backbone of any industry. In this visit, students learnt the course such as Computer Networks and Communication Skills. One day visit was organized on 16<sup>th</sup> January, 2016 at 10.30 AM. Near about 100 students (2<sup>nd</sup> and 3<sup>rd</sup> Year students) participated in the visit. Departmental faculty members (Prof. S.M. Gaikwad, Miss. S.S. Umbarkar, Mr. P.M. Hanpude, Mr. G.P. Lad, and Mr. S.S. Gandhi) also were part of this visit.

#### **Workshop on Employability Skills Development**

Three days Workshop organised for Third Year student on "Employability Skills Development" during 5<sup>th</sup> - 7<sup>th</sup> Feb., 2016. Ms. Sanjana Munj, Trainer of FUEL Team, Swades Foundation guided the student to make them eligible to apply for a job.

#### **Ignite Students Events**

Every year student association of department "Ignite" plan various events under Cultural, Literature & Sports activities. In this academic year different literary and technical events were organised and winners are awarded with certificate & medals.

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## **Department of Chemical Engineering**

1. **Year of inception – 1982**                   **Intake – 60**
2. **Courses Offered:**
  1. Diploma in Chemical Engineering
  2. Advanced Diploma in Water Quality Management

Chemical Engineering department was established in the year 1982. This was first department established in IoPE. Department completed 25 years in 2007 & 3 days silver jubilee function was held in Dec 2007. Total student intake is now 63 students.

3. **Faculty Members:**

Name	Designation	Academic Qualification	Specialization	Areas of interest
Dr. M.A. Dabhade	Principal	Ph.D. (Chemical Engg.)	Biochemical Engg.	Heat Transfer, Chemical reaction Engg., Mass Transfer, Water Treatment
Prof. R.S. Kulkarni	Lecturer (Sl. Grade)	B.Tech.	Chemical Engineering	Chemical Process Calculations, process inst. & control
Prof. Y.Y. Karkare	Lecturer	M. Tech.	Chemical Engg.	Heat Transfer, Reactive Distillation

**4. List of major equipment and other facilities:**

S.N.	Name of major equipment/ facility	Cost (> Rs. 1,00,000/- )
1	UPS 6 KVA	1,12,000
2	Gas Chromatograph – Netel make	4,40,000

**5 Conferences/Workshops/Trainings/Academic Awareness activities conducted:**

- a. Celebrated Teachers Day on 5<sup>th</sup> September, 2015 by SACHE (Students Association of Chemical Engineering) to honor and respect teachers of the department and also conducted Essay competition for students.
- b. Celebrated World Water Day – 2016 on 22<sup>nd</sup> March, 2016 to make students aware about water conservation.
- d. Diploma level Paper presentation competition was held on 22<sup>nd</sup> March, 2016.
- e. SACHE conducted various competitions such as chess, carom for students and prizes were distributed.
- f. Conducted Alumni meet for Diploma & ADWQM students on 22<sup>nd</sup> March, 2015.

**6. Academic Achievements of faculty: (Awards received, lectures delivered, etc.)**

- (a) Prof. Y.Y. Karkare attended two weeks program on Matlab & Simulation at Govt. College of Engg., Karad in June 2016.
- (b) Two experimental setups viz Double Pipe Heat Exchanger & Shell & Tube Heat Exchanger were repaired under project.
- (c) New experimental setup on Losses of Pipes is fabricated.

**7. Major Students' Achievements (GATE, GRE, GMAT, papers published, etc) -**

- (a) Students participated in paper presentation competition at our institute & won second prize
- (b) Students went for paper presentation in Nagothane Polytechnic & won second prize.
- (c) Department won silver medal and Gold medal in musical skit and silver medal in one act play event in University Annual Gathering ‘Abhiyanta Vasant – 2016’.
- (d) Two students won prizes in National level NCC camp

**Campus Interviews held and placement details**

S.N.	Name of Company	No. of students placed	Package
<b>Chemical Engineering</b>			
01	Gharda Chemicals Ltd; Chiplun-Ratnagiri	03	Rs. 1.6 Lakh per annum
02	Privi Organics, Mahad, Dist Raigad	03	Rs. 1.4 Lakh per annum
03	Pidilite Ind, Mahad	02	Rs. 1.4 Lakh per annum
04	Dipik Nitrite, Lote MIDC	04	Rs. 1.4 Lakh per annum
05	Sandoz Pvt. Ltd., Mahad	02	Rs. 1.4 Lakh per annum
<b>Advanced Diploma in Water Quality Management</b>			
01	Wipro Waters Ltd., Mumbai	08	Rs. 1.8 Lakhs + other allowances
02	Aquapuro Pvt. Ltd., Mumbai	12	Rs. 1.2 Lakhs + other allowances
03	Pepsico, Roha	04	Rs. 1.2 Lakhs + other allowances
04	PBS Water systems Pvt. Ltd, Navi Mumbai	04	Rs. 1.2 Lakhs + other allowances

**Result Analysis for Diploma in Chemical Engg. June 2016 (After results of Remedial Exam. in July 2016)**

	First Year	Second Year	Third Year
No. of Students	63	62	59
Passed in First Class with Distinction (>=7.0 GPA)	4	5	23
Passed in First Class GPA = 6.5 to <7.0	3	3	3
Passed in Second Class GPA = 5.0 to < 6.5	8	9	10
Passed in Pass Class GPA < 5.0	20	30	15

Passed in ATKT (credits >= 60 && <90)	20	12	05
Fails (Credits < 60)	3	03	03
% of Result	55.55	75.80	86.4

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## Instrumentation Engineering Department

### Departmental Activities:

S.N.	Activity	Date	Remarks	Co-ordinator
1.	New facilities created: • LCD Multimedia • Additional Lab • Introduction of supplementary classes	March 2016 April 2016 Dec. 2016		D. S. Karanjkar D. S. Karanjkar/S. G. Karad
2.	Industrial visit at Privi Organics, Mahad	15 March, 2016		S. G. Hingmire S. G. Karad
3.	Expert Lecture on: Automation & Safety	05 March 2016	By Mr. Prasad Salagare, Project Engineer, Rockwell Automation, Pune. All final year students attended.	S. G. Karad
4.	Campus Interview by Godrej & Boyce, Vikhroli, Mumbai	3 March 2016	3 Students selected. Rs. 16000/- salary for one year, and Rs. 20000/- after one year	D. S. Karanjkar
5.	Seminar on : KEEP MOVING: Motivational lecture series	26 Feb. 2016	By Mr. Naren Goidhani, Founder Life school, Pune, All final year students attended.	IOPE
6.	Expert Lecture on : Industrial automation	10 Feb. 2016	By Mr. Sachin Kadam, Entrepreneur, Pune	Mrs. S.S. Swami
7.	3 Days Workshop conduct on: Employability Skill Development	05 Feb. 2016	By Swades Foundation, Raigad	S. G. Hingmire
8.	Seminar on :Employability through Foreign languages	13 Jan. 2016	Final year students participated	S. G. Karad
9.	MOU	02 Jan. 2016	Between Instru. Dept of IOPE & Instru. Dept of MPCOE, Velneshwar, Guhagar	D. S. Karanjkar S. G. Hingmire
10.	One day Workshop on : DCS	02 Jan. 2016	133 students participated, 50 students from other Institutes	S. G. Hingmire
11.	Syllabus Revised	Dec 2015		D. S. Karanjkar/ All other faculty
12.	Vigilance week Programme	26- 31 Oct. 2015	Essay, Speech, Poster Competition	S. G. Karad Mrs. S.S. Swami
13.	Parent's Meet	30 Oct. 2015	50 Parent's were attended	S. G. Hingmire Mrs. S.S. Swami
14.	Educational visit	19 Oct. 2015	Walawalkar Hospital, Dervan, all Final year students participated	S. G. Hingmire Mrs. S. S. Swami
15.	Engineer's Day Celebration	15 Sept. 2015	Talk By Mr. Keshav Jahagirdar, Owner, ACE Automation, Pune	D. S. Karanjkar Mrs. S.S. Swami
16.	One day Workshop on : PLC	21 Aug. 2015	125 students participated, 40 students from other Institutes	D. S. Karanjkar
17.	Expert lecture on DCS	17 Apr. 2015	Lecture by Amey Kathe, Emerson Process Management, Mumbai.	D. S. Karanjkar Mrs. S.S. Swami
18.	Expert Lecture on : Microcontrollers	27 Feb. 2015	By Uzair Deshmukh, Sr. Service Engg. Honeywell, UAE	S. G. Karad Mrs. S. S. Swami
19.	Departmental Alumni meet	31 Jan. 2015	90 Alumni (from 1998 batch onwards) attended the function.	D. S. Karanjkar/All faculty
20.	Expert Lecture on : Industrial automation	7 Jan 2015	By Mr. Keshav Jahagirdar, ACE Automation, Pune	D. S. Karanjkar

### **Result analysis:**

<b>Year</b>	<b>Total Student Appeared For Exam</b>	<b>Total Student Passed</b>	<b>Percentage of Passing Result (%)</b>
First Year	63	23	36.50
Second Year	65	34	52.30
Third Year	63	46	73.00

### **Students' Achievements:**

<b>S.N.</b>	<b>Activity</b>	<b>Date</b>	<b>Remark</b>
1.	Campus selection at Godrej	Mar. 2016	1. Sandesh Bhadavkar 2. Harshal Davate 3. Roshan Jadhav
2.	TECH FEST 2K16 Event, MPCoE, Velneshwar	11-12 March 2016	15 students participated.
3.	Cynosure 2K16, 1 <sup>st</sup> Prize in Structura event, DBATU, Lonere	5 March 2016	Group of 3 students participated, Akshay Waghe, Harshad Karkare, Vikas Mane
4.	Sourabh Khamgaonkar	March 2016	1 <sup>st</sup> prize in District level Essay competition
5.	Interaction with Dr. Anil Kakodkar, at MPCOE, Velneshwar	12 Jan.2016	5 students attended
6.	1. Akshay Waghe 2. Vikas Mane 3. Harshal Karkare	Cynosure-2016	1 <sup>st</sup> prize of Cynosure Structura at Dr. BATU, Lonere
7.	Cultural Events:-Dance / Solo	Abhiyanta Vasant-2016	Amruta Pawar-Gold medal
8.	Duet Dance	Abhiyanta Vasant -2016	1.Amruta Pawar-Gold medal 2.Kajal Pansare- Gold medal
9.	Group Dance	Abhiyanta Vasant -2016	1.Amruta Pawar-Gold medal 2.Kajal Pansare- Gold medal 3.Ankita Salaskar- Gold medal
10.	Singing(Group)	Abhiyanta Vasant -2016	1.Sandesh Bhadavkar- Gold medal 2.Harshal Davate- Gold medal 3.Vikrant Mohite- Gold medal
11.	Outdoor: Volley Ball	Abhiyaan-2016	Amol Sanap and group(20 boys)- Gold medal
12.	Outdoor: Kho-Kho	Abhiyaan-2016	Sunil Sumbhe and group T.Y-Gold medal Lukesh Metha and group S.Y-Silver Medal
13.	Outdoor: Cricket	Abhiyaan-2016	F.Y. students (20 boys)- Gold Medal
14.	Outdoor: Football	Abhiyaan-2016	F.Y. students (10 boys)- Silver Medal
15.	Indoor: Carrom (Single)	Abhiyaan-2016	Mayur Khatavkar- Gold Medal
16.	Indoor: Carrom (Double)	Abhiyaan-2016	Mayur Khatavkar & Ritesh Chandorkar- Silver Medal
17.	Indoor: Carrom (Single)	Abhiyaan-2016	Amruta Gaikwad- Gold Medal
18.	Indoor: Carrom (Double)	Abhiyaan-2016	Amruta Pawar & Amruta Gaikwad- Gold Medal
19.	Mindspark 2K15 event, CoEP, Pune	Sept. 2015	2 students participated.

### **Faculty Achievements:**

<b>S.N.</b>	<b>Activity</b>
1.	Dr. D.S. Karanjkar, Completed Ph.D. in Solar Photovoltaic MPPT controller from Panjab University, Chandigarh in Sept. 2015
2.	Dr. D.S. Karanjkar, participated in Two one week STC's
3.	Prof. S.G. Hingmire worked as a reviewer in IEEE conference ICIC 2015 at CoEP, Pune.
4.	Expert Lecture on Control System delivered by Prof. S. G. Hingmire at VIT, Sajjangad, Satara.
5.	Prof. S.G. Karad, participated in Three one week STC's
6.	Prof. S.S. Swami, participated in One week (2)STC's & one week (1) STC
7.	Dr. D.S. Karanjkar was present as a Chief guest for Two days Virtual Lab Workshop, at MPCoE, Velneshwar
8.	Prof. S.G. Karad & Prof. S.S. Swami participated in Two days Virtual Lab Workshop, at MPCoE, Velneshwar
9.	All faculty attended 1 Day workshop on Happy Minds on 30 <sup>th</sup> Jan. 2016

# **Department of Electronics & Telecommunication Engineering**

The Department is established in the year 1995 with intake of 40 and then it is raised to 60 from 2008. Department has been accredited in 2005 by N.B.A., New Delhi for three years. The Department have immensely motivated & highly qualified faculty members with various specializations in adequate numbers on a regular appointment. Department is furnished with advanced teaching aids like LCD projector, Overhead projector, Instructional charts etc.

**Courses Offered:** Diploma in Electronics & Telecommunication Engg.

## **Faculty Members:**

Name	Designation	Academic Qualification	Specialisation	Areas of Interest
Dr. D.G. Jadhav	Head of Department	M.E. (Electronics Engg.), Ph.D.	Electronics Engg.	Signal Processing
Prof. M.P. Bhagat	Sl. Gr. Lecturer	M.E. (Electronics Engg.)	Electronics Engg.	Electronics Engg.
Prof. A.M. Kulkarni	Lecturer	M.Tech. (Communication Engg.)	Communication Engg.	Error Control Coding
Prof. H.H. Patil	Lecturer	B.E. (Electronics Engg.)	Electronics Engg.	Electronics Engg.
Prof. S.M. Gaikwad	Lecturer	M.E. (Electronics Engg.)	Electronics Engg.	Electronics Engg.
Prof. A.J. Naik	Lecturer	M.Tech. (Electronics & Telecom. Engg.)	Electronics & Telecom. Engg.	Antenna
Prof. L.D. Narote	Lecturer	M.E. (Electronics Engg.)	Electronics Engg.	Electronics Engg.

## **4. List of major equipment and other facilities:**

S.N.	Name of Major Equipment/Facility	Cost (>Rs. 1,00,000/-)
1	Microwave Test Bench NT9000	94669/-
2	Microwave Test Bench NT9001	102238/-
3	Antenna Trainer	108646/-
4	Computer Simulation Lab (HP PRO 2090, 15NOs.)	465000/-

## **5. Conferences/Workshops/Trainings/Academic Awareness activities conducted:**

- a) Organised Industrial Visit to All India Radio, Ratnagiri on 03/03/2016 of second year students.
- b) Organised Industrial Visit to HPT Doordarshan, Aurangabad during first week of April 2016 of third year students.
- c) University Network Engineer's Expert Lecture is planned on "Internet Network Systems" during last week of March 2016.
- d) Prof. A.M. Kulkarni presented paper entitled "Performance Analysis of DFT-OFDM and Wavelet based OFDM system" at National Conference organized by Finolex Academy of Management and Technology, Ratnagiri on 17<sup>th</sup>-18<sup>th</sup> February 2016.
- e) Prof. H.H. Patil presented paper entitled "Design of H-Fractal Antenna for multiband applications" at National Conference organized by Finolex Academy of Management and Technology, Ratnagiri on 17-18<sup>th</sup> February 2016.
- f) Six faculty members of department participated in one week workshop on "Recent Trends in Energy Research" at DBATU Lonere on 7-11 December 2015.
- g) Four faculty members of department participated in three day training programme on "Practical Electromagnetics for Modern Antennas, RF and Microwave Designs using ANSYS HFSS" at DBATU Lonere on 25-27 September 2015.
- h) Dr. D.G. Jadhav participated in one week workshop on "Institutional Preparation for Accreditation and Academic Audit" at NITTTR extension center Pune on 1-5 February 2016.
- i) Department conducted one day workshop on "Stress Management" on 30<sup>th</sup> January 2016.
- j) Prof. A.M. Kulkarni of department is participating in one week workshop on "MATLAB and its applications" at NITTTR, Chandigarh on 7-11 March 2016.
- k) Prof. A.J. Naik of department is participating in two week workshop on "Induction Phase-II" at NITTTR extension center Pune on 7-18 March 2016.

## **6. Publications:**

- a) Prof. A.M. Kulkarni published paper entitled “Performance Analysis of DFT-OFDM and Wavelet based OFDM system” in Asian Journal of Convergence in Technology 2016.
- b) Prof. H.H. Patil published paper entitled “Design of H-Fractal Antenna for multiband applications” in Asian Journal of Convergence in Technology 2016.

## **7. Academic Achievements of faculty:**

Prof. D.G. Jadhav completed Ph.D. in Electronics & Communication Engg. from Panjab University, Chandigarh.

## **8. Result analysis:**

Electronics and Telecommunication Engineering Department

S.N.	Class	Total Students	Passed Students	Passing Percentage
01	First Year	64	30	46.87%
02	Second Year	67	41	61.19%
03	Third Year	59	51	86.44%

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## **Department Polymer and Plastic Engineering**

- 1) Department students also organized the routine department programs like farewell for passing and fresher program for newly admitted students. The department also celebrated the Engineer’s Day on 15<sup>th</sup> September and Teacher’s day on 5<sup>th</sup> September. Department also conducted Swatcha Bharat Program.
- 2) Department is successful in providing industrial jobs to students. M/s Positive Packaging Pvt. Ltd., Khapoli visited the institute for campus placements and selected 9 students, including 3 female. The department is also arranging an Industrial visit of the M/s Positive Packaging and M/s Sempertrans Nirlons Pvt. Ltd. Both companies are multi-national and market leaders in their field.
- 3) Department started an internal library facility to benefit the students last year and successfully running to it. Any student from the department can directly approach to the department for issue of available books. These books were received from our University Library as they have kept these for disposal. The department is also planning to conduct a three day workshop on “Employability Skill Development” for final year and pass out students via collaboration with SWADES Foundation.
- 4) The department also successfully organized its first Alumni meet on 18<sup>th</sup> April, 2015. Nearly 75 alumni attended the meet which started on 11:30 AM and closed on 04:30 PM with felicitation to all our distinguished alumni. The alumni response was fantastic and its need was felt by all alumni and our present students.
- 5) The department also provided a Whats’app platform naming “Polymers Engineers Memory” for interaction with our alumni. The alumni and our present students, all are getting benefit out of it.

## **Staff Activities:**

- 1) All departmental faculty members utilized their winter vacation to attend STTP on Recent Trends in Energy Research (under TEQIP-II) from 07/12/2015 to 11/12/2015 at DBATU Lonere.
- 2) All departmental faculty members also participated in one day workshop on “Stress Management at IoPE on 30/01/2016.
- 3) Prof. S.A. Dawale attended induction phase-II from 16/03/2016 to 27/03/2016 at NITTTR Bhopal and also attended STTP on N.I.C.E. under TEQIP-II from 18/05/2015 to 22/05/2015 at DBATU Lonere.
- 4) Prof. R.A. Pardeshi has been Conferred ME (Plastic Engg.) Degree from ICT, (Mumbai) with AB Grade (9) on 3<sup>rd</sup> March 2016.
- 5) Prof. S.A. Dawale acted as course expert lecturer in Government Polytechnic, Nashik for Curriculum Development.

- 6) Prof. R.A. Pardeshi participated and presented his technical paper title “Natural fiber Composite : A review” at 2nd National conference on Recent Advances in Science and Technology, Finolex Academy of Management and Technology, Ratnagiri from 17/02/2016 to 18/02/2016. He also attended 2 days workshop on “Virtual Lab” organized by COEP, Pune and Velneshwar College, Guhagar.
- 7) Prof. R.A. Pardeshi completed one week training Programme on “Institutional preparation for Accreditation and Academic audit” at NITTTR extension center, Pune from 1<sup>st</sup>to5<sup>th</sup>February, 2016.

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## **Chapter Three**

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## **Financial Matters**

**3.1 Fee Structure**

**3.2 Balance Sheet**



## Chapter Three

# Financial Matters

### 1. Fee Structure

Fees for all courses are charged according to the rules framed by the Government of Maharashtra from time to time. The postgraduate courses are run on non-grant basis, the structure of fees is given in the succeeding section as approved by the University.

	<b>Year of Admission</b>
A) Tuition Fees:	Rs. 15,000.00
B) Development Fund:	Rs. 21,065.00
C) Other Fees:	
1) Gymkhana Fees	Rs. 880.00
2) Training & Placement Fees	Rs. 550.00
3) Library Fees	Rs. 4400.00
4) Internet & E-mail facilities Fees	Rs. 2761.00
5) Annual Social Gathering & Other Cultural Activities Fees	Rs. 880.00
6) Laboratory Fees	Rs. 5500.00
D) University Fees :	
1) Students Aid Fund	Rs. 300.00
2) Enrolment Fees	Rs. 000.00
3) Examination Fees	Rs. 1600.00
4) Gymnasium Fees	Rs. 100.00
5) Ashwamedh & Indradhanushya Fees	Rs. 30.00
6) N.S.S Fees	Rs. 10.00
7) Aptkalin Needhi	Rs. 10.00
8) Networking Fees	Rs. 500.00
9) MIS Fees	Rs. 100.00
<b>Total Fees</b>	<b>Rs. 53,686.00</b>

**2. Balance Sheet:**

Dr. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE- 402 103  
TAL. - MANGAON, DIST. - RAIGAD

(GOVERNMENT & NON-GOVERNMENT EXCEPT M.TECH)

BALANCE SHEET AS ON 31ST MARCH 2016

LIABILITIES	Sch.	AMOUNT Rs.	ASSETS	Sch.	AMOUNT Rs.
Non-Recurring Grant	1	1,114,073,455	Fixed Assets	5	367,649,511
Funds	2	225,174,123	Investments	6	455,329.415
Deposits	3	7,040,725	Current Assets	7	195,028,113
Current Liabilities	4	77,491,081	Income & Expenditure 419007127.68 -13234782.25		405,772,345
<b>Total Rs.</b>		<b>1,423,779,384</b>	<b>Total Rs.</b>		<b>1,423,779,384</b>

AS PER MY REPORT OF EVEN DATE

S S S AM & CO  
CHARTERED ACCOUNTANTS  
Place : Pune  
Date : 29/06/2016

FINANCE OFFICER  
Dr. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,  
LONERE - 402 103

**Dr. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE- 402 103**  
 TAL. - MANGAON, DIST. - RAIGAD

(GOVERNMENT & NON-GOVERNMENT EXCEPT M.TECH)

INCOME & EXPENDITURE FOR THE YEAR ENDED ON 31ST MARCH 2016

EXPENDITURE	AMOUNT	INCOME	AMOUNT
SALARY & WAGES	164,082,354	ADMISSION FEE	38,60,916
DEPRECIATION	53,695,972	ALUMNI ASSOCIATION FEES	67,900
VECHICLE MAINTENANCE	386,205	ANNUAL SOCIAL GATHERING FEES	11,45,525
ADVERTISEMENT	479,543	APTKAL IN NEEDHI	26,225
AUDIT EXPENSES	162,732	ARC 04 CAP ROUND PROCESSING FEE	14,850
AVHAN	11,208	ASHWAMEDH & INDRADANUSHYA FEE	20,480
AVISHKAR	34,518	AVISHKAR FEES	57,795
BANK CHARGES A/C	9,240	CONSULTANCY CHARGES	2,40,344
CYNOSURE	124,833	CONVOCATION FEES	6,89,700
ELECTRICITY CHARGES	5,029,525	DEVELOPMENT FEES	21,600
EXAMINATION EXP.	1,341,381	ENROLMENT FEES	1,35,700
GARDENING EXP.	9,558	GYMKHANA FEES	15,38,631
GATHERING EXP	4,208	GYMNASIUM FEES	2,55,100
HONORIRIUM	3,055	HOSTEL FEES	44,05,857
HOSTEL MAINTENANCE	14,000	HOSTEL FORM FEE	35,380
INDEPENDENCE DAY	35,062	INTERNET & E-MAIL FACILITIES FEES	41,20,363
ISO 9001:2008	5,21,360	LABORATORY FEES	82,37,647
LABORATORY EXP.	5,000	LATE FEES	72,621
MAINTENANCE OF BUILDING	21,21,207	LIBRARY FEES	64,92,195
MATERIAL & SUPPLIERS	35,44,159	LICENCE FEES	10,17,446
NCC EXP.	32,500	MIS FEES	2,60,279
NETWRKING EXP.	5,000	NETWORKING FEES	14,10,500
NEWS PAPER & MAGAZINE	143,514	N.S.S. FEES	25,550
NSS EXPENSES	110,761	OTHER FEES	1,31,78,800
OFFICE EXPENSES	207,214	PAYABLE TO STUDENT	36,058
POSTAGE	20,000	REGISTRATION FEES	500
PP & SS	56,48,399	STUDENT AID FUND	7,82,550
PRINTING & STATIONERY	18,58,988	TRAINING & PLACEMENT FEES	8,37,117
REMUNERATION	31,22,670	TUITION FEES	2,56,20,000
SEMINAR EXP.	27,531	WATER CHARGES	5,31,399
SHIVJAYANTI EXP.	2,68,000	EXAMINATION FEES	92,62,228
STUDENTACTIVITES	66,957	CONTRACT BASIS	1,29,950
STUDENTS PRIZES	46,052	GUEST HOUSE RENT	3,45,025
TELEPHONE CHARGES	98,717	I CARD	1,46,200
TRAINING & PLACEMENT	42,964	INTEREST ON SAVING BANK A/C	21,61,403
TRANSPORTATION CHARGES	11,500	INTRFEST ON TDR	3,12,32,579
TRAVELLING EXP.	14,656	LAND RENT	9,000
UNIVERSITY FOUNDATION DAY	43,814	LIBRARY COLLECTION	17,918
UNIVERSITY MEMBER SHIP FEE	1,00,005	MISCELLANEOUS INCOME	2,19,378
VEHICLE INSURANCE	1,12,050	MKCL DIVIDEND	50,000
EXCESS OF INCOME OVER EXPENDITURE	1,32,34,782	NSS GRANT	89,203
		PH. D. RETENTION FEES	20,000
		SERVICES CHARGES	65,500
		STATE GOVT GRANT SALARY	14,05,40,000
		TENDER FORM FEES	32,445
		UTI DIVIDEND	28,471
<b>TOTAL</b>	<b>25,89,77,900</b>	<b>TOTAL</b>	<b>25,89,77,900</b>

**Dr. B.A.T.U. M Tech - 2015-2016**

Lonere

**Balance Sheet**

1 - Apr. - 2015 to 31 - Mar. - 2016

<b>Liabilities</b>	<b>Schedule</b>	<b>as at 31-Mar-2016</b>	<b>Assets</b>	<b>Schedule</b>	<b>as at 31-Mar-2016</b>
Income & Expenditure	1	6,30,77,065	Fixed Assets	5	12,10,321
Funds	2	87,600	Investment	6	2,76,66,305
Deposits	3	2,81,495	Current Assets	7	4,32,79,366
Current Liabilities	4	87,09,832			
	<b>TOTAL</b>	<b>7,21,55,992</b>		<b>TOTAL</b>	<b>7,21,55,992</b>

AS PER MY REPORT OF EVEN DATE

S S SAM & CO  
CHARTERED ACCOUNTANTS  
Place : Pune  
Date : 29/06/2016

FINANCE OFFICER  
Dr. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,  
LONERE - 402 103

**Dr. B.A.T.U. M Tech - 2015-2016**  
Lonere

**Income and Expenditure Account**

1 - Apr. - 2015 to 31 - Mar. - 2016

Particulars	Dr. B.A.T.U. M Tech - (From 1 - Apr. - 2015 to 31 - Mar. - 2016)		Particulars	Dr. B.A.T.U. M Tech (From 1 - Apr. - 2015 to 31 - Mar. - 2016)	
	Indirect Expenses	Direct Incomes		Indirect Expenses	Direct Incomes
Bank Charges	172.00	2270975.00	Apatalkin Needhi	1570.00	
Depreciation	208083.00		Ashwamedh, Indradhanushya Etc Fees	4710.00	
Office Expenses	4050.00		Convocation Fees	43800.00	
Remuneration	1839350.00		Enrolment Fees	12600.00	
TAVDA	36030.00		Examination Fees	251200.00	
Teaching Assistantship	183290.00		Gymkhana Fees	160124.00	
<b>Excess of Income over Expenditure</b>	<b>2829215.00</b>		Gymnacium Fees	15700.00	
			I Card Fees	16800.00	
			Internet & E-Mail Facilities Fee	502315.00	
			Laboratory Fees	1000670.00	
			Late Fees	1000.00	
			Library Fees	800536.00	
			MIS Fees	15700.00	
			Student Aid Fund	47100.00	
			Training & Placement Fees	100109.00	
			<b>Indirect Incomes</b>	<b>2126226.00</b>	
			Bank Interest	377612.00	
			Interest on TDR	1717014.00	
			NS S Fee	157000	
<b>Total</b>	<b>5100190.00</b>		<b>Total</b>	<b>5100190.00</b>	

**Budget Allotment for Academic Departments:**

		CHEMICAL	MECH	PETROCHEM	COMPUTER	ELECTRICAL	INFO TECH	ELECT & TELECOM	CIVIL	CHEMISTRY	PHYSICS	MATHS	ENGLISH
	EXPENSE DETAILS	Budget Estimates 15-16											
P.1.1	Salaries and wages Teaching	90,00,000	1,90,00,000	27,94,650	57,34,850	56,57,850	61,74,550	48,03,100	19,50,700	24,12,800	23,99,550	29,89,550	7,13,600
P.1.2	Salaries and wages Non-Teaching	10,00,000	12,00,000	8,07,250	7,20,000	10,44,750	12,00,000	10,56,200	6,22,000	5,65,500	3,50,850	0	0
P.1.3	Ad-Hoc Salary Payments Teaching	8,00,000	5,00,000	8,63,350	0	7,65,750	1,68,700	14,22,450	16,85,500	8,13,900	7,40,650	4,92,700	2,41,450
P.1.4	Ad-Hoc Salary Payments Non-Teaching	75,000	2,00,000	78,000	3,80,000	78,000	90,000	2,00,000	64,800	58,350	72,000	0	0
P.1.5	Daily Wages Salary	50,000	60,000	30,000	50,000	63,000	50,000	50,000	28,400	50,000	50,000	50,000	20,000
P.1.6	Machinery & Equipment: UG	18,00,000	18,00,000	12,00,000	12,00,000	12,00,000	12,00,000	24,05,000	26,55,000	2,40,000	1,50,000	0	0
P.1.7	Machinery & Equipment: PG	7,50,000	24,00,000	0	1,89,000	1,95,000	0	12,00,000	0	0	0	0	0
P.1.8	LIBRARY UGC FUNDS	36,00,000	36,00,000	36,00,000	12,00,000	12,00,000	12,00,000	25,00,000	0	0	0	0	0
P.1.9	P.1.1 Laboratory 0 Expenditure [recurring]	0	0	0	0	0	0	0	0	0	0	0	0
P.1.1 1	TADA	84,000	1,20,000	60,000	34,000	60,000	84,000	84,000	20,000	36,000	36,000	36,000	20,000
P.1.1 2	Medical/LTC	84,000	144,000	50,000	34,000	60,000	84,000	84,000	20,000	48,000	48,000	48,000	36,000
P.1.1 3	Telephone Charges	0	0	0	0	0	0	0	0	0	0	0	0
P.1.1 4	Conferences & Seminars Reg. & TADA	72,000	50,000	48,000	72,000	48,000	72,000	60,000	20,000	24,000	36,000	36,000	20,000
P.1.1 5	Office Expenses	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	1,200	1,200	6,000	1,200
P.1.1 6	Departmental Students' Activities	25,000	25,000	25,000	25,000	25,000	25,000	60,000	25,000	0	0	0	0
P.1.1 7	Impress for Miscellaneous Expenses	60,000	60,000	60,000	60,000	60,000	60,000	72,000	60,000	20,000	20,000	20,000	10,000
<b>Total Academic expenses:</b>		<b>1,80,06,000</b>	<b>3,01,65,000</b>	<b>99,82,250</b>	<b>1,02,54,850</b>	<b>1,08,23,350</b>	<b>1,07,74,250</b>	<b>1,43,57,750</b>	<b>73,02,400</b>	<b>44,09,750</b>	<b>40,04,250</b>	<b>35,78,250</b>	<b>10,62,250</b>

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## **Chapter Four**

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### **Some Achievements through TEQIP-II**



## Chapter Four

# Some Achievements through TEQIP-II

### **Participation in TEQIP-I and TEQIP-II**

The University has derived benefits by participating in TEQIP-I as well as TEQIP-II. The University has chalked out following main objectives for TEQIP-II.

- To admit full-time doctoral students in various disciplines by giving them fellowships.
- To involve M.Tech. and doctoral students in the above projects.
- To involve 3<sup>rd</sup> year and final year UG students in the above projects.
- To conduct need-based training and continuing education programmes for industry and increase IRG.
- To restructure PG curricula to align them with market requirements.
- To impart need-based training to faculty in pedagogy and subject/domain knowledge.
- To impart need-based training to technical and supporting staff and boost their morale.
- To enhance finishing school activity for SC/ST/OBC and academically weak students and thereby improve their transition rate, pass rate, skills and employability.

### **Reforms due to TEQIP**

- Curriculum Reforms
- Choice-based Curriculum
- Five Electives
- Self-study Courses
- Innovative Courses
- Mapping with NPTEL Courses
- Research-oriented projects are being given even at B.Tech. level. Final year B.Tech. students are attached to M.Tech. /Ph.D. students for these projects.
- Collaborative projects have been carried out with ICT/IIT-B/BARC
- Participation in 7 Innovation Networking Projects (INN) with ICT Mumbai
- Research Methodology workshops have been conducted for M.Tech./Ph.D. students
- 29 full-time Ph.D. students have been admitted under TEQIP-II.
- More than 50 papers have been presented by M.Tech. /Ph.D. students in the last year. About 220 papers have been published during the last 3 years.
- Induction program on “Pedagogy” are being conducted regularly even for contract basis faculty.
- e-Governance: Online Attendance System/Online Ph.D. admissions and monitoring have been established.

### **Activities for Faculty & Staff Development**

#### **1. Faculty Development Activity**

1	FDPs conducted in-house	15
2	FDPs on pedagogy conducted in-house	03
3	Faculty deputed outside for FDPs/STTPs/workshops	112
4	Faculty deputed for conferences within India	26
5	National conferences conducted in-house	01
6	International conferences conducted in-house	01

## 2. Staff Development Activity

1	SDPs conducted jointly with CoEP and WCE Sangli	03
2	Staff members deputed outside for SDPs/workshops	164
3	Study tours of supporting staff	06

## 3. Participation of Faculty in International Conferences Abroad:

Till-date, three faculty members have presented their papers in international conferences abroad.

### Status of Procurement

#### **List of major equipment and software with their utility (costing more than Rs. 5 lakhs)**

S. N.	Item	Utility
1	Spectrum Analyser	B.Tech./M.Tech. projects and Ph.D.
2	EMI Analyzer	B.Tech./M.Tech. projects and Ph.D.
3	Focussed microwave for synthesis	Research Scholar Ph.D. work
4	Diffused Microwave Reactor	Research Scholar Ph.D. work
5	Stirred hot-plate (digital-plate) laboratory reactor	Research Scholar Ph.D. work
6	Wireless Sensor Motes	M. Tech. projects and Ph.D.
7	CAD Workstations with network interface and audio	B.Tech. / M.Tech. Projects and Training
8	Submerged Arc Welding Machine	B.Tech. / M.Tech. (Advanced welding projects/ Training programme)
9	ICT Components	B. Tech. online lecture facility, Training
10	PCB Prototyping Machine	B. Tech./M. Tech. projects and Ph.D.
11	Advanced RF & microwave antenna trainer	B. Tech./M. Tech. projects and Ph.D.
12	Combined Nitrogen Cum Air Generator	Research Scholar Ph.D. work
13	Renewable energy Laboratory, Wind Wind Emulator	B. Tech. / M.Tech. (Lab work/Advanced and minor projects/Testing/ Training program)
14	Renewable energy Laboratory, Wind Emulator	B. Tech./ M. Tech. (Lab work/Advanced and minor projects/ Testing/Training program)
15	Renewable Solar PV trainer, Emulator	B. Tech. / M.Tech. (Lab work/Advanced and minor projects/ Testing/Training program)
16	dSPACE Kit 1104	B. Tech./M. Tech. projects and Ph.D.
17	AE Software and system	B. Tech./ M.Tech./ Ph.D. (Acoustic emission correlation with metal cutting process)
18	NI Data acquisition system	M. Tech. projects and Ph.D.
19	Tool makers Microscope	B. Tech./ M.Tech./ Ph.D. (tool wear measurement)
20	Embedded system	B.Tech. / M.Tech. Projects and training
21	Software CATIA	B. Tech. / M.Tech. (Training/ Projects)
22	Software for metal working simulation Abacus	B. Tech. / M.Tech. (Training/ Projects) and Ph.D. Projects
23	Opti-System Software	B. Tech./M. Tech. projects and Ph.D.
24	EM Simulation software	B. Tech./M. Tech. projects and Ph.D.
25	FEKO Software suite	B. Tech./M. Tech. projects and Ph.D.
26	ANSYS Academic Research CFD	B. Tech. / M.Tech. (Training/ Projects) and Ph.D. Projects
27	MATLAB Software	B. Tech. / M.Tech. (Projects) and Ph.D. Projects
28	SIMTEL Software	B. Tech. / M.Tech. (Projects) and Ph.D. Projects and Training



**Steam Generation Device**



**Deep Freezer**



**Stirred Hot-Plate Reactor**



**Wind Emulator**



**Focused Microwave For Synthesis**



**Microwave Generator**



**Analytical Balance**



**Diffused Microwave Reactor**



**Air And Nitrogen Generator**

#### **Expenditure on Procurement till-date**

S.N.	Item	Expenses(Rs. in lakhs)
1	Equipment	419.08
2	Software	59.46
3	Books	14.08
4	E-Books	3.24
5	Furniture	28.64
<b>Total (Rs. in lakh)</b>		<b>524.50</b>



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## **Chapter Five**

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### **Convocations**



## **Chapter Five**

# **Convocations**

### **6.1 Examination Department**

#### **Examination System of the University:**

The University is an autonomous organization established by the act of Maharashtra Government and it conducts examinations according to the provisions made in the University act, its rules and regulations. The University has adopted the semester system of examinations.

#### **Unitization of Syllabus:**

The course contents of each subject have been divided into 6 Units. The Units 1 & 2 are covered before the first periodic test. The Units 3 & 4 are covered after the 1<sup>st</sup> test but before 2<sup>nd</sup> test. Units 5 & 6 are covered after 2<sup>nd</sup> test but before the start of preparation leave for end semester examination. The end semester examination is based on all the six units.

#### **Credits System:**

The University has adopted credits based system. As per this system, the student has to complete prescribed credits within a stipulated time limit. The evaluation of the students 'performance is done by giving 'letter grade' to each subject. The overall performance is evaluated by calculating cumulative grade point average (CGPA).

#### **Continuous Evaluations:**

The assessment of the performance of the students is carried out on a continuous basis. It is based on two periodic tests of 15 marks each and an end semester examinations of 70 marks.

#### **Examinations Results:**

The results of end semester examination are declared within 45 days after the last paper.

#### **Remedial Teaching:**

The University provides the facility of remedial teaching to weaker students. In this scheme, the identification of the failed students requiring special guidance in each theory subject is done immediately after the declaration of the semester examination results. Then special coaching classes are conducted for the students in respect of those topics of the subjects which are important either from the examination view point or difficult to be understood by them conceptually.

#### **Complete Transparency:**

There is complete transparency in the examination system. After each test examination, the student is shown his/her answer books. He/She can discuss with the teacher about the marks given and the discrepancy, if any, is rectified immediately. A facility of re-assessment of semester examination answer books is available for all students. Re-examination of failed students is taken at the end of following semester.

## 6.2 Gold Medal Winners

### M.Tech. Courses

Chemical Engineering	Mali Chaitanya Raosaheb
Computer Engineering	Gandhi Sanil Santosh
Electronics & Telecommunication Engg.	Wadekar Ashwini Shivaji
Manufacturing Engineering	Arab Julfekar M. Mastan
Power Systems Engineering	Bhise Monali Shashikant
Thermal & Fluids Engineering	Dorwat Ajit Laxman

### B.Tech. Courses

Chemical Engineering	Deshmukh Ketan Janardan
Civil Engineering	Pulgamkar Chetan Balkrushna
Computer Engineering	Kharde Shubham Raosaheb
Electrical Engineering	Kavale Pranav Prabhakar
Electronics & Telecommunication Engineering	Kamble Amar Janardan
Information Technology	Patil Arati Prakash
Petrochemical Engineering	Meshram Prajakta Rajendra

### Diploma Courses

Chemical Engineering	Maheskar Shimlan Salim
Computer Engineering	Talathi Sayali Shrikant
Electrical Engineering	Sakpal Amol Babu
Electronics & Telecommunication Engineering	Gadkari Prathamesh Shekhar
Information Technology	Chauhan Neha Balbirsingh
Instrumentation Engineering	Devre Jugal Shantaram
Petrochemical Engineering	Kavade Sandip Dnyandeo
Polymer & Plastic Engineering	Bamgude Aniket Dilip

### Advanced Diploma Course

Water Quality Management	Rawoot Hurbanu A. Hamid
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## **Chapter Six**

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### **Celebration of 125<sup>th</sup> Ambedkar Jayanti**



## Chapter Six

# Celebration of 125<sup>th</sup> Ambedkar Jayanti

Every year the University organizes Dr. Babasaheb Ambedkar Memorial Lecture on 14<sup>th</sup> April. On this occasion several programmes were organized by the University throughout the year. Some of the activities are Essay Competition, Elocution Competition on life and works of Dr. Ambedkar, Rangoli Competition, Quiz Competition, Clay Modeling and Poetry Recital Competition. The students participated in all these competitions under the guidance of staff members of the University. The staff members co-ordinated all these events with enthusiasm. One of the appreciated events was the elocution competition where total 15 students from B.Tech as well as Diploma participated. The following topics were announced for the competition through wide publicity in the University and hostels of the University a week before the competition to be held.

- Dr. Babasaheb Ambedkar & His Contribution in Nation Building
- Dr. Babasaheb Ambedkar & His Contribution in Women Empowerment
- Dr. Babasaheb Ambedkar & Indian Constitution
- Dr. Babasaheb Ambedkar as Educationist
- Dr. Babasaheb Ambedkar & his Contribution in Social Equality

Dr. Babasaheb Ambedkar Memorial Lecture was organised on 15<sup>th</sup> April, 2016. The lecture was delivered by Mr. B.G. Kolse Patil. Apart from Dr. Babasaheb Ambedkar Memorial lecture several other functions like birth anniversaries of Mahatma Phule, Savitribai Phule were organised in the University.



**Elocution Competition**



**Savitribai Phule Jayanti**



**Savitribai Phule Jayanti**



**Constitution Day**



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## **Chapter Seven**

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### **Administrative / Non-Teaching Staff**



## Chapter Seven

# Administrative / Non-Teaching Staff

### **VC Secretariat**



Shri. P.K. Pendse  
PA to Vice-Chancellor  
M.Com., LLB

### **Establishment Section:**



Dr. V.G. Sargade  
I/c Registrar  
M.Tech., Ph.D.



Shri. V.S. Gaikwad  
Office Superintendent  
B.A.



Smt. S.T. Avhad  
Senior Clerk  
B.Sc.



Shri. S.A. Mahadik  
Steno-typist  
B.Com.



Shri. B.D. Batawale  
Clerk-cum-typist  
B.A.



Shri. Vivek Khargaonkar  
Jr. Clerk  
S.S.C.

### **Finance and Accounts Section:**



Dr. Vivek S. Sathe  
In-charge Finance Officer  
M.Tech., Ph.D.



Shri. R.S. Metkari  
Auditor  
B. Com., LLB,



Shri. P.S. Nawale  
Accountant  
S.Y. B. Com.



Shri. P.V. Ware  
Senior Clerk  
B. A.



Shri. N.T. Shinde  
Clerk-cum-typist  
B. A.



Shri. V.H. Tavsalkar  
Clerk-cum-typist  
B. Com.

**Store :**



Shri. Ganpat Hari Kalsekar  
Store Verification officer  
B. Com.

डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठ,  
लोणेरे - ४०२ १०३.



**वार्षिक अहवाल २०१५ – २०१६**

विद्याविहार, लोणेरे, जि. रायगड – ४०२ १०३

महाराष्ट्र

## **वार्षिक अहवाल समिती**

- डॉ. अे. पी. शेष, समन्वयक
- डॉ. एस. आर. भगत, सदस्य
- प्रा. सौ. एम. डी. लङ्घा, सदस्य
- प्रा. एम. एफ. ओ. आर. सातारकर, सदस्य
- प्रा. सौ. एस. आर. हिवरे, सदस्य
- डॉ. अे. आर. चव्हाण, सदस्य – सचिव

## अनुक्रमणिका

प्रकरण क्र.	शीर्षकपान क्र.
१. विद्यापीठाची प्राधिकरणे	१८३
२. विद्यापीठातील विभाग	१९७
३. आर्थिक बाबी	३४१
४. TEQIP - II चे यश	३४९
५. पदवीदान समारंभ	३५५
६. १२५ वी डॉ. बाबासाहेब आंबेडकर जयंती	३५९
७. प्रशासकीय / शिक्षकेतर कर्मचारी	३६३



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## प्रकरण १

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# विद्यापीठाची प्राधीकरणे



# प्रकरण १

## विद्यापीठाची प्राधीकरणे

विद्यापीठाच्या कार्यकारी परिषदेच्या निर्देशानुसार डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठाचा ३१ मार्च २०१६ रोजी संपणाऱ्या वर्षाचा वार्षिक अहवाल तयार केला आहे.

कुलपती : मा. श्री. सी. विद्यासागर राव

कुलगुरु : डॉ. डब्ल्यू. एन. गाडे (२ मार्च, २०१५ ते २ मार्च, २०१६)

कुलगुरु : डॉ. व्ही. जी. गायकर (२ मार्च, २०१६ पासून)

### १.१ विद्यापीठाचे अधिकारी :

अ) कार्यकारी परिषद (१ जुलै, २०१५ ते २९ फेब्रुवारी २०१६)

अ.क्र.	नाव	पद
१	कुलगुरु	अध्यक्ष
२	श्री. प्रमोद नाईक	सदस्य
३	डॉ. ओ. जी. काकडे	सदस्य
४	डॉ. एस. एल. नलबलवार	सदस्य
५	डॉ. एम. ए. दाभाडे	सदस्य
६	डॉ. व्ही. जी. सरगडे	सदस्य
७	प्रा. व्ही. पी. जवंजाळ	सदस्य
८	प्रा. यु. एन. गायतोडे	सदस्य
९	डॉ. आर. एन. मोहंती	सदस्य
१०	डॉ. पी. डी. पोरे	सदस्य
११	डॉ. अश्विनी कुंटे	सदस्य
१२	कुलसचिव	सचिव

### कार्यकारी परिषद (१ मार्च, २०१६ पासून)

अ.क्र.	नाव	पद	परिषदेतील पद
१	प्रा. व्ही. जी. गायकर	कुलगुरु	अध्यक्ष
२	डॉ. एस. के. महाजन	संचालक, तंत्रशिक्षण संचालनालय, महाराष्ट्र राज्य (किंवा त्यांचे प्रतिनिधी)	सदस्य
३	प्रा. जी. डी. यादव	राज्यपालांचे नामनिर्देशित प्रतिनिधी	सदस्य
४		अधिष्ठातांचे प्रतिनिधी	सदस्य
५	डॉ. पी. व्ही. विजय बाबू	विद्यापीठातील विभागप्रमुखांचे प्रतिनिधी	सदस्य

	डॉ. पी. के. ब्राह्मणकर	विद्यापीठातील विभागप्रमुखांचे प्रतिनिधी	
६		दहा संलग्न महाविद्यालयांतील विभागप्रमुखांचे प्रतिनिधी	सदस्य
७		प्रादेशिक केंद्राचे चार प्रतिनिधी	सदस्य
८	प्रा. एम. एस. तांदळे प्रा. एस. व्ही. खोब्रागडे	विद्यापीठातील प्राध्यापक व सहायक प्राध्यापकांचे प्रतिनिधी	सदस्य
९		उपकेंद्रांचे तीन प्रतिनिधी	सदस्य
१०	पद्मश्री मिलींद कांबळे श्री. प्रमोद चौधरी डॉ. विवेक वडके प्रा. आनंद कुसरे	चार नामांकित शास्त्रज्ञ किंवा तंत्रज्ञ	सदस्य
११	डॉ. ए. डब्ल्यु. किवळेकर	प्र. कुलसचिव	सचिव

ब) विद्यापरिषद : (१ जुलै, २०१५ ते २९ फेब्रुवारी २०१६)

अ.क्र.	नाव	पद
१	कुलगुरु	अध्यक्ष
२	डॉ. पी. व्ही. विजय बाबू	सदस्य
३	प्रा. व्ही. पी. जवंजाळ	सदस्य
४	डॉ. एस. एल. नलबलवार	सदस्य
५	डॉ. पी. के. ब्राह्मणकर	सदस्य
६	डॉ. पी. के. कट्टी	सदस्य
७	डॉ. ए. डब्ल्यु. किवळेकर	सदस्य
८	प्रा. एस. एम. जाधव	सदस्य
९	डॉ. एस. एम. पोरे	सदस्य
१०	डॉ. एम. ए. दाभाडे	सदस्य
११	प्रा. जी. डी. यादव	सदस्य
१२	संचालक, TIFR	सदस्य
१३	प्राचार्य, LBSCAMSR	सदस्य
१४	कार्यकारी संचालक, RCF, चेंबूर	सदस्य
१५	डॉ. व्ही. जी. गायकर, ICT, मुंबई	सदस्य
१६	डॉ. एस. एस. जोशी, IIT, मुंबई	सदस्य
१७	डॉ. बी. एन. चौधरी, CoE, पुणे	सदस्य
१८	डॉ. एम. एस. सुतावणे, CoE, पुणे	सदस्य

१९	डॉ. व्ही. जी. सरगडे	सदस्य
२०	डॉ. एच. ए. मुजावर	सदस्य
२१	डॉ. बी. बी. सिंग	सदस्य
२२	डॉ. पी. बी. लोखंडे	सदस्य
२३	कुलसचिव	सचिव

### विद्यापरिषद (१ मार्च, २०१६ पासून)

अ.क्र.	नाव	पद	परिषदेतील पद
१	प्रा. व्ही. जी. गायकर	कुलगुरु	अध्यक्ष
२		संचालक / अधिष्ठाता, संशोधन व विकास	सदस्य
३		अधिष्ठाता (अभियांत्रिकी व तंत्रज्ञान, औषध निर्माण शास्त्र, वास्तुरचना व होटेल मैनेजमेंट.	सदस्य
४		विभागप्रमुख / संचालक, सर्व विभागीय केंद्रे	सदस्य
५		संचालक, विद्यापीठाचे उपकेंद्र	सदस्य
६	प्रा. पी. व्ही. विजय बाबू प्रा. पी. के. ब्राह्मणकर डॉ. ओ. डब्ल्यु. किवळेकर डॉ. के. वदीराजाचार्य डॉ. एस. एम. पोरे डॉ. एस. एम. जाधव डॉ. एस. एल. नलबलवार प्रा. व्ही. पी. जवंजाळ डॉ. बी. बी. सिंग डॉ. एल. एन. सिंग डॉ. ए. पी. शेष डॉ. एच. ए. मुजावर डॉ. एम. ए. दाभाडे	सर्व विभागप्रमुख	सदस्य
७		कुलगुरुंनी नामनिर्देशीत केलेले संलग्न महाविद्यालयातील दोन विभागप्रमुख	सदस्य
८		संलग्न महाविद्यालयांचे दहा प्राचार्य	सदस्य
९	श्री. यु. व्ही. धात्रक, कार्यकारी संचालक, आर. सी. एफ., थळ	अध्यक्ष, आर. सी. एफ. मुंबई किंवा त्यांचे प्रतिनिधि	सदस्य
१०	प्रा. पी. व्ही. विजय बाबू	सर्व विद्याशाखांचे अध्यक्ष	सदस्य

	प्रा. पी. के. ब्राह्मणकर डॉ. अे. डब्ल्यु. किवळेकर डॉ. के. वदीराजाचार्य डॉ. एस. एम. पोरे डॉ. एस. एम. जाधव डॉ. एस. एल. नलबलवार डॉ. पद्मा देवराजन श्री. प्रशांत देशमुख		
११	प्रा. जे. व्ही. आधाव प्रा. वाय. व्ही. जोशी डॉ. व्ही. एम. भंडारी, एन. सी. एल., पुणे डॉ. नितीन देशमुख डॉ. आर. बालसुब्रमण्यम श्री. समिर राणे डॉ. मोहन खेडकर प्रा. व्ही. के. राठोड प्रा. एम. बी. कुमठेकर	कुलगुरुंनी नामनिर्देशीत केलेले विविध अभियांत्रिकी शाखांमधील दहा तज्ज्ञ	सदस्य
१२	प्रा. एम. एस. तांदळे डॉ. एल. एन. सिंग प्रा. एस. व्ही. खोब्रागडे	कुलगुरुंनी नामानिर्देशीत केलेले तीन प्राध्यापक, एक प्राध्यापक, एक सहयोगी प्राध्यापक व एक सहाय्यक प्राध्यापक (सेवा ज्येष्ठतेनुसार)	सदस्य
१३	डॉ. व्ही. जी. सरगडे	कुलसचिव	सचिव

क) नियोजन व परिक्षण समिती : (१ जुलै, २०१५ ते २९ फेब्रुवारी २०१६)

अ.क्र.	नाव	पद
१	कुलगुरु	अध्यक्ष
२	डॉ. पी. डी. पोरे	सदस्य
३	डॉ. एन. जे. राठोड	सदस्य
४	डॉ. व्ही. व्ही. महाजनी	सदस्य
५	डॉ. बी. एम. नाईक	सदस्य
६	डॉ. जे. पी. मोडक	सदस्य
७	कुलसचिव	सचिव

**नियोजन व परिक्षण समिती : (१ मार्च, २०१६ पासून)**

अ.क्र.	नाव	पद	समितीतील पद
१	प्रा. व्ही. जी. गायकर	कुलगुरु	अध्यक्ष
२	डॉ. एस. के. महाजन	संचालक, तंत्रशिक्षण संचालनालय किंवा त्यांचे प्रतिनिधी	सदस्य
३	प्रा. जी. डी. यादव	कुलपतींनी नामनिर्देशीत केलेले कार्यकारी परिषदेचे सदस्य	सदस्य
४		विभागीय केंद्रांचे चार प्रतिनिधी	सदस्य
५		उपकेंद्रांचे पाच प्रतिनिधी	सदस्य
६	प्रा. पी. व्ही. विजय बाबू प्रा. ओ. डब्ल्यु. किवळेकर	संशोधन व विकास विभागाचे प्रभारी	विशेष निमंत्रित
७		कार्यकारी परिषदेने नामनिर्देशीत केलेले नियोजन व परिक्षण क्षेत्रातील दोन तज्ज्ञ	सदस्य
८	श्री. प्रशांत देशमुख श्री. समिर राणे	नामनिर्देशीत केलेले नियोजन व परिक्षण क्षेत्रातील दोन तज्ज्ञ	सदस्य
९	डॉ. ओ. डब्ल्यु. किवळेकर	प्रभारी कुलसचिव	सचिव

**ड) वित्त समिती : (१ जुलै, २०१६ ते २९ फेब्रुवारी, २०१६)**

अ.क्र.	नाव	पद
१	कुलगुरु	अध्यक्ष
२	डॉ. ओ. जी काकडे	सदस्य
३	डॉ. एस. एल. नलबलवार	सदस्य
४	प्रा. यु. एन. गायतोंडे	सदस्य
५	संचालक, तंत्रशिक्षण संचलनालय	सदस्य
६	ओ. आय. सी. टी. ई.चे प्रतिनिधी	सदस्य
७	कुलसचिव	सदस्य
८	वित्त अधिकारी	सचिव

**वित्त समिती : (१ मार्च, २०१६ पासून)**

अ.क्र.	नाव	पद	समितीतील पद
१.	प्रा. व्ही. जी. गायकर	कुलगुरु	अध्यक्ष
२.	डॉ. एस. के. महाजन किंवा त्यांनी नामनिर्देशीत केलेली व्यक्ती	संचालक, तंत्रशिक्षण संचलनालय किंवा त्यांचे प्रतिनिधी	सदस्य
३.	डॉ. रमेश उन्नीकृष्णन	ओ. आय. सी. टी. ई.चे प्रतिनिधी, संचालक,	सदस्य

		पश्चिम विभाग, अे. आय. सी. टी. ई.	
४.		विभागीय केंद्रांचे चार प्रतिनिधी	सदस्य
५.		उपकेंद्रांचे तीन प्रतिनिधी	सदस्य
६.	डॉ. एस. एम. पोरे डॉ. एस. एल. नलबलवार	अधिष्ठाता, संशोधन व विकास व अधिष्ठाता, शिक्षक	निर्मन्त्रित
७.	प्रा. जी. डी. यादव	कार्यकारी परिषदेने नामनिर्देशीत केलेले दोन सदस्य (एक सदस्य कुलपतिंनी नामनिर्देशीत केलेला कार्यकारी परिषदेचा सदस्य असावा)	सदस्य
८.		राज्यशासनाने नामनिर्देशीत केलेली एक व्यक्ति	सदस्य
९.	डॉ. ए. डब्ल्यू. किवळेकर	प्रभारी कुलसचिव	सदस्य
१०	डॉ. व्ही. एस. साठे	प्रभारी वित्त अधिकारी	सचिव

इ) विद्यापीठातील इतर समित्या : (प्रकरण ४, ३२ (१))

१ अ) इमारत व बांधकाम समिती (१ जुलै, २०१५ ते २९ फेब्रुवारी, २०१६)

अ.क्र.	नाव	पद
१	कुलगुरु	अध्यक्ष
२	डॉ. ओ. जी. काकडे	सदस्य
३	श्री. व्ही. डी. छत्रे	सदस्य
४	अधिकारी अभियंता	सदस्य
५	कार्यकारी अभियंता	सदस्य
६	कुलसचिव	सदस्य
७	वित्त अधिकारी	सदस्य
८	श्री. व्ही. एस. चव्हाण	सचिव

इमारत व बांधकाम समिती : (१ मार्च, २०१६ पासून)

अ.क्र.	नाव	पद	समितीतील पद
१	प्रा. व्ही. जी. गायकर	कुलगुरु किंवा त्यांच्या अनुपस्थितीत संचालक (प्रशासन)	अध्यक्ष
२	प्रा. जी. डी. यादव	कुलपतिंनी नामनिर्देशीत केलेले कार्यकारी परिषदेचे सदस्य	सदस्य
३	अधिकारी अभियंता, सार्वजनिक बांधकाम विभाग	विद्यापीठाच्या विभागामधील अधिकारी अभियंता, सार्वजनिक बांधकाम विभाग	सदस्य
४	श्री. व्ही. बी. सातपुते कार्यकारी अभियंता	विद्यापीठाच्या विभागामधील कार्यकारी अभियंता, सार्वजनिक बांधकाम विभाग	सदस्य
५	श्री. शंशाक मेहेंदले	कार्यकारी परिषदेच्या मान्यतेने खाजगी क्षेत्रातील तज्ज अभियंता	निर्मन्त्रित सदस्य

६	श्री. प्रशांत देशमुख	कुलपर्तीनी नामानिर्देशीत केलेले खाजगी क्षेत्रातील तज्ज्वास्तुविशारद	निमंत्रित सदस्य
७	डॉ. ए. डब्ल्यू. किवळेकर	प्रभारी कुलसचिव	सदस्य
८	डॉ. व्ही. एस. साठे	प्रभारी वित्तअधिकारी	सदस्य
९	प्रा. एस. एम. पोरे प्रा. एस. एल. नलबलवार प्रा. के. वदीराजाचार्य	विद्यापिठातील तीन विभागप्रमुख	
१०	श्री. व्ही. एस. चव्हाण	विद्यापीठ अभियंता	सदस्य
११	श्री. व्ही. डी. छत्रे	कार्यकारी समितीतील एक सदस्य	सचिव

इमारत व बांधकाम समितीची उपसमिती		
अ.क्र.	नाव	पद
१	कुलगुरु	अध्यक्ष
२	इमारत व बांधकाम समितीतील दोन सदस्य डॉ. एस. एम. पोरे डॉ. एस. एल. नलबलवार	सदस्य
३	वित्त अधिकारी	सदस्य
४	विद्यापीठ अभियंता	सचिव

ई) खरेदी समिती (१ जुलै, २०१५ ते २९ फेब्रुवारी २०१६)

अ.क्र.	नाव	पद
१	कुलगुरु	अध्यक्ष
२	डॉ. पी. के. कट्टी	सदस्य
३	डॉ. एस. एल. नलबलवार	सदस्य
४	कुलसचिव	सदस्य
५	डॉ. पी. व्ही. विजय बाबू	सदस्य
६	डॉ. पी. के. ब्राह्मणकर	सदस्य
७	प्रा. व्ही. पी. जवंजाळ	सदस्य
८	वित्त अधिकारी	सचिव
९	श्री. जी. एच. काळसेकर	विशेष निमंत्रीत

खरेदी समिती (१ मार्च, २०१६ पासून)

अ.क्र.	नाव	पद	समितीतील पद
१	प्रा. व्ही. जी. गायकर	कुलगुरु किंवा त्यांच्या अनुपस्थितीत संचालक (प्रशासन)	अध्यक्ष

२	डॉ. पी. व्ही. विजयबाबू डॉ. एस. एल. नलबलवार डॉ. एस. एम. जाधव	कुलगुरुंनी नामनिर्देशीत केलेले तीन विभागप्रमुख	सदस्य
३	प्रा. आनंद कुसरे प्रा. एस. व्ही. खोब्रागडे	कार्यकारी परिषदेतील दोन सदस्य	सदस्य
४	डॉ. अे. डब्ल्यु. किवळेकर	प्रभारी कुलसचिव	सदस्य
५	डॉ. व्ही. एस. साठे	प्रभारी वित्त अधिकारी	सचिव

खरेदी समितीची उपसमिती			
अ.क्र.	नाव		पद
१)	डॉ. व्ही. जी. सरगडे	संचालक (प्रशासन) यांची नियुक्ती होईपर्यंत	अध्यक्ष
२)	डॉ. एस. एल. नलबलवार डॉ. एस. एम. जाधव	खरेदी समितीतील कुलगुरुंनी नामनिर्देशीत केलेले दोन सदस्य	सदस्य
३)	वित्त अधिकारी		सचिव

### ३) ग्रंथालय समिती (१ जुलै, २०१५ ते २९ फेब्रुवारी २०१६)

अ.क्र.	नाव	पद
१	कुलगुरु	अध्यक्ष
२	डॉ. पी. के. ब्राह्मणकर	सदस्य
३	डॉ. पी. व्ही. विजय बाबू	सदस्य
४	डॉ. पी. के. कट्टी	सदस्य
५	डॉ. एस. एल. नलबलवार	सदस्य
६	प्रा. व्ही. पी. जंवजाळ	सदस्य
७	कुलसचिव	सदस्य
८	श्री. एस. पी. वैद्य, ग्रंथपाल	सचिव

### ग्रंथालय समिती (१ मार्च, २०१६ पासून)

अ.क्र.	नाव	पद	समितीतील पद
०१	प्रा. व्ही. जी. गायकर	कुलगुरु	अध्यक्ष
०२	डॉ. एम. ओ. दाभाडे डॉ. एस. एल. नलबलवार प्रा. व्ही. पी. जंवजाळ	कुलगुरुंनी नामनिर्देशीत केलेले तीन विभाग प्रमुख	सदस्य
०३	डॉ. विजय बनसोड डॉ. आर. पी. काटे	कार्यकारी परिषदेने नामनिर्देशीत केलेले दोन शिक्षक	सदस्य
०४	डॉ. अे. डब्ल्यु. किवळेकर	प्रभारी कुलसचिव	सदस्य

## १.२ प्रवेश प्रक्रिया

### पदवीस्तर

विद्यार्थीतातील प्रवेश प्रक्रिया महाराष्ट्र शासनाने वेळोवेळी निर्देशीत केलेल्या नियमांना अनुसरून केंद्रीभूत पद्धतीने पार पाडली जाते. ८५% जागांवर केंद्रीभूत पद्धतीने प्रवेश दिले जातात व १५% जागा ह्या कोकण विभागातील (ठाणे, रायगड व सिधुरुग जिल्ह्यात) विद्यार्थीसाठी राखीव आहेत. महाराष्ट्र शासन व मानव संसाधन विकास मंत्रालय, भारत सरकार यांनी वेळोवेळी निर्देशीत केलेल्या सूचनांप्रमाणे मागासवर्गीय, इतर मागासवर्गीय व विद्यार्थीनीसाठी काही जागा आरक्षित असतात.

### पदविका

पदविका विभागातील प्रवेश प्रक्रिया महाराष्ट्र शासनाने वेळोवेळी निर्देशीत केलेल्या नियमांना अनुसरून केंद्रीभूत पद्धतीने पार पाडली जाते. एकूण जागांपैकी ७०% जागा रायगड जिल्ह्यातील विद्यार्थीसाठी अरक्षित असतात व शिळ्यक ३०% जागा महाराष्ट्रातील इतर जिल्ह्यांमधील विद्यार्थीसाठी उपलब्ध असतात. महाराष्ट्र शासन व मानव संसाधन विकास मंत्रालय, भारत सरकार यांनी वेळोवेळी निर्देशीत केलेल्या सूचनांप्रमाणे मागासवर्गीय, इतर मागासवर्गीय व विद्यार्थीनीसाठी काही जागा आरक्षित असतात.

### पदव्युत्तर पदवी

महाराष्ट्रातील अग्रगण्य वर्तमानपत्रांमध्ये जाहीरात प्रकाशित करून रसायन अभियांत्रिकी, यंत्र अभियांत्रिकी, विद्युत अभियांत्रिकी, अणु विद्युत व दुरसंचार अभियांत्रिकी व संगणक अभियांत्रिकी या विभागातील पदव्युत्तर पदवीची प्रवेश प्रक्रिया पार पाडली जाते. GATE परीक्षा पात्र असलेल्या विद्यार्थ्यांना गुणवत्तेच्या आधारावर प्रवेश दिला जातो. उर्वरित जागांसाठीची प्रवेश प्रक्रिया विभाग स्तरावर प्रवेश परीक्षा घेऊन पार पाडली जाते. प्रवेश प्रक्रिया व मौखिक चाचणी यांच्या आधारावर हे प्रवेश दिले जातात. महाराष्ट्र शासन व मानव संसाधन विकास मंत्रालय, भारत सरकार यांनी वेळोवेळी निर्देशीत केलेल्या सूचनांप्रमाणे मागासवर्गीय, इतर मागासवर्गीय व विद्यार्थीनीसाठी काही जागा आरक्षित असतात. हे अभ्यासक्रम विना अनुदानित तत्वावर चालवले जातात.

### अँडव्हान्स डिप्लोमा इन वॉटर कॉलिटी मॅनेजमेंट

सदरील अभ्यासक्रमासाठी २० जागा उपलब्ध आहेत ज्यापैकी १० जागा कंपनीने प्रायोजित केलेल्या विद्यार्थीसाठी राखीव आहेत. उर्वरित दहा जागांसाठी महाराष्ट्र शासनाच्या नियमानुसार प्रवेश प्रक्रिया राबविली जाते. हा अभ्यासक्रम विना अनुदानीत तत्वावर चालविला जातो. प्रवेशासाठी उमेदवारांनी अभियांत्रिकीची पदविका किंवा विज्ञान विषयातील पदवी (बी.एस्सी.) अभ्यासक्रम पूर्ण केला असला पाहिजे.

## १.३ अभ्यासक्रमांचा आढावा

### १.३.१ पदवी अभ्यासक्रम

अ.क्र.	अभ्यासक्रमांचे नाव	प्रवेश क्षमता	अभ्यासक्रमाचा कालावधी	अभ्यासक्रम सुरु झाल्याचे वर्ष
०१.	खडक रसायन अभियांत्रिकी	६०	०४	१९८९
०२.	यंत्र अभियांत्रिकी	६०	०४	१९९२
०३.	रसायन अभियांत्रिकी	६०	०४	१९९२
०४.	संगणक अभियांत्रिकी	६०	०४	१९९५
०५.	अणुविद्युत व दुरसंचार अभियांत्रिकी	१२०	०४	१९९५
०६.	विद्युत अभियांत्रिकी	६०	०४	१९९५

०७.	माहिती तंत्रज्ञान	६०	०४	२००९
०८.	स्थापत्य अभियांत्रिकी	६०	०४	२००८

### १.३.२ पदव्युत्तर पदवी अभ्यासक्रम :

अ.क्र.	अभ्यासक्रमांचे नाव	प्रवेश क्षमता	अभ्यासक्रमाचा कालावधी	अभ्यासक्रम सुरु झाल्याचे वर्ष
०१	रसायन अभियांत्रिकी	१८	०२	२००९
०२.	संगणक अभियांत्रिकी	१८	०२	२००९
०३.	अणुविद्युत व दुरसंचार अभियांत्रिकी	१८	०२	२००९
०४.	पर्यावरण अभियांत्रिकी	१८	०२	२००२
०५.	मॅन्युफॅक्चरिंग अभियांत्रिकी	१८	०२	२००२
०६.	थर्मल व फ्युइंड्स अभियांत्रिकी	१८	०२	२००३
०७.	पॉवर सिस्टीम अभियांत्रिकी	१८	०२	२००८

### १.३.३ पदवीका अभ्यासक्रम

अ.क्र.	अभ्यासक्रमांचे नाव	प्रवेश क्षमता	अभ्यासक्रमाचा कालावधी	अभ्यासक्रम सुरु झाल्याचे वर्ष
०१	रसायन अभियांत्रिकी	६०	०३	१९८२
०२.	खडक रसायन अभियांत्रिकी	६०	०३	१९९३
०३.	पॉलीमर व प्लॉस्टिक अभियांत्रिकी	६०	०३	१९९३
०४.	उपकरणीय अभियांत्रिकी	६०	०३	१९९४
०५.	संगणक अभियांत्रिकी	१२०	०३	१९९५
०६.	विद्युत अभियांत्रिकी	६०	०३	१९९५
०७.	अणुविद्युत व दुरसंचार अभियांत्रिकी	६०	०३	१९९५
०८.	माहिती तंत्रज्ञान	६०	०३	२००९

### १.३.४ अँडव्हान्स डिप्लोमा

अ.क्र.	अभ्यासक्रमांचे नाव	प्रवेश क्षमता	अभ्यासक्रमाचा कालावधी	अभ्यासक्रम सुरु झाल्याचे वर्ष
०१	अँडव्हान्स डिप्लोमा इन वॉटर कॉलिटी मॅनेजमेंट	२०	१ ½ वर्ष	१९९८

### १.४ विद्यापीठ परिसर

विद्यापीठाचा विस्तार ४७० एकराच्या विस्तीर्ण व सुंदर परिसरात झालेला आहे. कोकण विभागातील राष्ट्रीय महामार्ग क्र. १७ च्या जवळ हे विद्यापीठ वसलेले आहे. हे विद्यापीठ मुंबईच्या दक्षिणेला १६० कि.मी. व पुण्याच्या पश्चिमेला १२० कि.मी. आहे. येथील जवळचे रेल्वेस्थानक १० कि.मी. अंतरावर आहेत. हे विद्यापीठ राज्यातील पहिले तंत्रशास्त्र विद्यापीठ आहे. उत्कृष्ट शैक्षणिक मुल्यांच्या आधारावर महाराष्ट्रातील सर्व विभागातील विद्यार्थ्यांसाठी हे एक आकर्षण आहे,

अभियांत्रिकीच्या विविध क्षेत्रामध्ये उत्कृष्ट पद्धतीने काम करण्याच्या दृष्टीने अभियंते व तंत्रज्ञ घडविण्याचे काम आम्ही येथे करतो.

विद्यापीठ परिसरात १५०० विद्यार्थीनीना राहता येईल अशी वसतिगृहे उपलब्ध आहेत जेथे जवळपास सर्व विद्यार्थीनीना प्रवेश दिला जातो. १०० संगणक असलेले संगणक केंद्र विद्यापीठात आहे. तसेच इंटरनेटची सुविधा सर्व वसतिगृहे व कर्मचारी निवास्थानामध्ये उपलब्ध आहेत. मागासवर्गीय विद्यार्थ्यांना विनामुल्य पुस्तक पेढीची सुविधा उपलब्ध आहेत. भारतीय स्टेट बँकेचे ए.टी.एम. व विस्तारीत कक्ष विद्यापीठ परिसरात आहे. झेरॉक्स व सर्व प्रकारचे शैक्षणिक साहित्य विद्यापीठ पतपेढीच्या दुकानामध्ये उपलब्ध आहे.

#### १.५ NAAC द्वारे विद्यापीठाचे परीक्षण

विद्यापीठाने NAAC, बैंगलोर येथे प्रमाणीकरणासाठी एप्रिल २०१४ मध्ये अर्ज केला होता. या समितीतील तज्ज्ञ प्रतिनिधींनी ४ आणि ७ फेब्रुवारी २०१५ च्या दरम्यान नामांकन व गुणांकनासाठी विद्यापीठास भेट दिली. यामध्ये विद्यापीठास सदरील समितीने 'ब' प्रदान केली.



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## प्रकरण २

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### विद्यापीठातील विभाग

- २.१ रसायन अभियांत्रिकी विभाग
- २.२ स्थापत्य अभियांत्रिकी विभाग
- २.३ संगणक अभियांत्रिकी विभाग
- २.४ अणुविद्युत व दुरसंचार अभियांत्रिकी विभाग
- २.५ माहिती तंत्रज्ञान
- २.६ यंत्र अभियांत्रिकी विभाग
- २.७ खडकरसायन अभियांत्रिकी विभाग
- २.८ रसायनशास्त्र विभाग
- २.९ गणित विभाग
- २.१० भौतिकशास्त्र विभाग
- २.११ इंग्रजी विभाग



## प्रकरण २

# विद्यापीठातील विभाग

## रसायन अभियांत्रिकी विभाग



डॉ. पी. व्ही. विजय बाबू  
प्राध्यापक व विभागप्रमुख

### १. विभागप्रमुखांचा संदेश :

मला रसायन अभियांत्रिकी विभागाचा वार्षिक अहवाल आपल्यासमोर मांडताना आनंद होतो आहे. विद्यार्थ्यांना दर्जेदार शिक्षण देणे व त्यांना सुसंस्कृत बनविणे ह्यासाठी विभाग सदैव प्रयत्नशील आहे. त्याचाच परिणाम म्हणून विभागातून शिक्षण पूर्ण केलेले विद्यार्थी औद्योगिक व शैक्षणिक क्षेत्रात उत्तम कामगिरी करीत आहेत.

उत्तम प्रकारचे शिक्षण देण्याशिवाय विभागातील विद्यार्थ्यांना स्पर्धा परिक्षांच्या तयारीसाठी व क्रिडाक्षेत्रात नैपुण्य दाखविण्यासाठी सतत प्रोत्साहन दिले जाते. जेणेकरून विद्यार्थ्यांचा सर्वांगीण विकास व्हावा, त्यामुळेच विभागातील विद्यार्थी व यांसारख्या परिक्षांमध्ये उज्ज्वल यशाची परंपरा राखली आहे. तसेच राष्ट्रीय छात्र सेना व राष्ट्रीय सेवा योजना यांसारख्या उपक्रमातही भाग घेताना दिसतात.

विद्यार्थ्यांना उच्च शिक्षण व रोजगाराच्या दृष्टीने सर्व प्रकारचे मार्गदर्शन विभागातील प्राध्यापकांकडून केले जाते. Chemfraternity हा कार्यक्रम विद्यार्थ्यांसाठी एक मोठे आकर्षण आहे. यामधून विद्यार्थ्यांना वेगवेगळ्या स्पर्धांच्या आयोजनाचा अनुभव मिळतो. आयआयटी व एन.आय.टी सारख्या संस्थांमधील तज्ज्ञ प्राध्यापकांचे व्याख्यान. विद्यार्थ्यांसाठी नियमित आयोजित केले जातात. तसेच जवळपाससच्या औद्योगिक संस्थांसोबत (जसे महाड, लोटे, परशुराम, रोहा व पातळांगा) या विभागाने उत्तम संबंध प्रस्थापित केले आहेत.

जागतिक स्तरावरील आव्हानांचा सामना करण्याच्या दृष्टीने विद्यार्थ्यांना सक्षम करण्याच्या दृष्टीने विद्यार्थ्यांना सक्षम करण्याच्या दृष्टीने व त्यांचा सर्वांगीण विकास व्हावा यासाठी विभाग सदैव सहकार्य करीत राहील.

डॉ. पी. व्ही. विजयबाबू  
विभागप्रमुख, रसायन,  
अभियांत्रिकी विभाग

### २. विभागाचे ध्येय व उद्दिष्टे :

#### ध्येय :

विविध संशोधन विषयांशी रसायन अभियांत्रिकीच्या अभ्यासक्रमांची सांगड घालून त्यास राष्ट्रीय स्तरावर सर्वमान्यता मिळवून देणे.

#### उद्दिष्ट :

आम्ही येथे विभागामध्ये विद्यार्थ्यांना सर्वोच्च दर्जाचे शिक्षण घेऊन त्यांना औद्योगिक क्षेत्रामध्ये चांगले नेतृत्व करण्यासाठी सक्षम बनवतो. विभागात आम्ही रसायन अभियांत्रिकीच्या क्षेत्रामधील नवीन ज्ञान व संशोधनाला प्रोत्साहन देतो. आम्ही रसायन अभियांत्रिकीच्या क्षेत्रात शिक्षण व सेवेसाठी समर्पित आहोत.

### ३. विभागाबद्दल :

रसायन अभियांत्रिकी विभागाची स्थापना १९९२ साली ६० प्रवेशक्षमतेच्या B. Tech. पदवीने झाली. वर्ष २००० मध्ये रसायन अभियांत्रिकी व वर्ष २००१ मध्ये Environmental Engineering च्या पदव्युत्तर पदवी अभ्यासक्रमांची

सुरुवात झाली. वर्ष २००३ मध्ये रसायन अभियांत्रिकीच्या क्षेत्रातील अभ्यासक्रमांचीही सुरुवात झाली. विद्यार्थ्यांतील पहिला Ph. D. चा अभ्यासक्रम पूर्ण करणारा विद्यार्थी रसायन अभियांत्रिकीचाच आहे. सध्या १२ विद्यार्थ्यांनी Ph. D. साठी नोंदणी केली आहे.

विभागामध्ये समर्पित अशा शिक्षकवृद्धाचा संच आहे. जबळपास सर्वच शिक्षकांनी Ph. D. ची पदवी संपादन केली आहे. नवनवीन संशोधन कार्यक्रम राबविण्यासाठी विभागाने ICT मुंबई सोबत विविध करार केले आहेत. रसायन अभियांत्रिकीचे मुलभूत ज्ञान संपादन केलेले उत्कृष्ट अभियंते धडविण्यावर विभागाचा भर आहे.

आजूबाजूच्या औद्योगिक संस्थांशी विभागाने उत्कृष्ट संबंध प्रस्थापित केले आहेत. विभागाचा जागतिक बँकेच्या TEQIP ह्या कार्यक्रमामध्येही सक्रिय सहभाग आहे. विभागातील विविध संशोधन प्रकल्पासाठी AICTE, UGC, ONGC व DST सारख्या विविध संस्थांकडून अनुदान मिळाले आहे. सर्व प्रकारचे संशोधन प्रकल्प राबविण्यासाठी लागणाऱ्या सुसज्ज प्रयोगशाळा विभागात उपलब्ध आहेत.

विभागातून उत्तीर्ण झालेले बहुतांश विद्यार्थी उद्योग व शिक्षणक्षेत्रामध्ये उत्तम कामगिरी करीत आहेत. मागील काही वर्षात विद्यार्थ्यांना नामांकित उद्योगांमध्ये रोजगारांच्या संधी उपलब्ध झाल्या आहेत.

विभागातील बहुतांश विद्यार्थी विविध स्पर्धा परीक्षा देताना दिसून येतात. काही विद्यार्थी उच्च शिक्षणासाठी परदेशातही जातात. अभ्यासक्रमाचा एक भाग म्हणून विद्यार्थ्यांना द्वितीय व तृतीय वर्षाच्या शेवटी औद्योगिक प्रशिक्षण घ्यावे लागते. सैद्धांतिक अंगांचे सखोल ज्ञान विद्यार्थ्यांना देण्याच्या दृष्टीने विभागातील विद्यार्थ्यांसाठी विविध उद्योगांना भेटींचे आयोजन केले जाते. विविध परिसंवाद, शैक्षणिक, क्रिडाविषयक व स्पर्धात्मक उपक्रमांमध्ये सहभागी होण्यासाठी विद्यार्थ्यांना प्रोत्साहन दिले जाते. उद्योगांच्या सहकायांनी राज्यस्तरीय Chemfraternity ह्या तंत्रोत्सवाचे विभागामार्फत नियमित आयोजन केले जाते.

#### ४. शैक्षणिक उद्दिष्ट्ये (PEOs)

Objective Identifier	उद्दिष्ट्ये
PEO1	विद्यार्थ्यांना रासायनिक अभियांत्रिकीमधील विविध संकल्पना व गणितीय सिद्धांत यांचे सखोल ज्ञान देणे.
PEO2	विद्यार्थ्यांना मुख्य विषयातील उत्कृष्ट व अद्यावत माहितीने परिपूर्ण करणे जेणेकरून ते या ज्ञानाचा वापर करून नाविन्यपूर्ण गोर्षींचा विकास करतील व समाजातील प्रश्नांचे समाधान शोधतील.
PEO3	विद्यार्थ्यांच्या तांत्रिक बाजु मजबूत करणे जेणेकरून ते या विषयातील पदव्युत्तर पदवी घेण्यास किंवा संशोधन व विकास या क्षेत्रामध्ये स्वतःची छाप पाढू शकतील.
PEO4	उद्योग विश्वातील बदलत्या परिस्थतीनुसार लागणारे ज्ञान आत्मसात करण्यासाठी मार्गदर्शन व उद्योग विश्वातील विविध प्रश्न समजून घेऊन त्याचे उत्तर शोधण्याचे कौशल्य प्राप्त करून घेण्यास त्यांना पात्र बनविणे.
PEO5	स्पर्धेमध्ये टिकून राहण्यासाठी आवश्यक असणारी कौशल्ये प्राप्त करून देणे व इतर कौशल्ये आत्मसात करण्यासाठी प्रोत्साहीत करणे.

#### Programme Outcomes

Outcomes Identifier	उद्दिष्ट्ये
PO1	पदवीधारकांना गणित, भौतिकशास्त्र, रसायनशास्त्र, रसायन व खडकरसायन विषयातील पायाभूत ज्ञान प्राप्त करू शकतील.
PO2	पदवीधारक रसायन अभियांत्रिकी संबंधीत समस्यांचे निराकारण, विश्लेषण करण्यास पात्र होतील.
PO3	पदवीधारक समस्या निराकारणासाठी लागणारी आधुनिक उपकरणे हाताळण्यास पात्र होतील.

<b>PO4</b>	पदवीधारक रसायन अभियांत्रिकी विषयाचा अर्थकारण, पर्यावरण व सामाजिक संदर्भावर होणारा परिणाम समजु शकतील.
<b>PO5</b>	पदवीधारकांना रसायन अभियांत्रिकी विषयातील अत्याधुनिक ज्ञान मिळेल.
<b>PO6</b>	पदवीधारकांना संवाद कौशल्ये जसे की लेखन कौशल्य, भाषण कौशल्य, श्रवण कौशल्ये यांचा विकास करता होईल.
<b>PO7</b>	विविध समुहामध्ये काम करण्याचे कौशल्य प्राप्त होईल.
<b>PO8</b>	व्यावसायिक जबाबदारीचे भान होईल.
<b>PO9</b>	आत्मविश्वास आणि शिकण्याचे कौशल्य प्राप्त होईल.

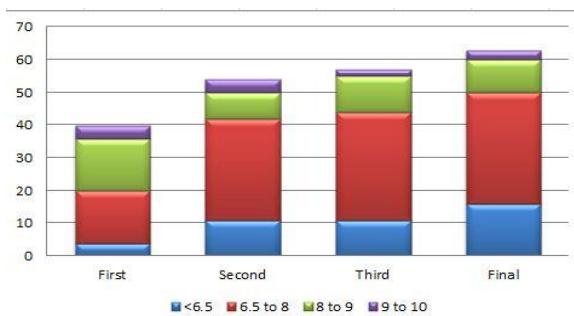
#### ५. विभागातील अभ्यासक्रमांचा आढावा

अभ्यासक्रम	कालावधी	प्रवेश क्षमता
<b>पदवी अभ्यासक्रम</b>		
Bachelor of Technology (B.Tech)	रसायन अभियांत्रिकी	४ वर्षे
<b>पदव्युत्तर पदवी</b>		
Master of Technology (M.Tech)	रसायन अभियांत्रिकी	२ वर्षे
Ph.D. (विद्यावाचस्पती)	रसायन अभियांत्रिकी	१२ सध्या प्रवेश घेतलेले

#### ५.१ पदवीच्या विद्यार्थ्यांची सांख्यीकी माहिती

वर्ष	खुला	इमाव	अजा	अज	विजा	विमाव	आविमाव	TFWS	अपंग	मुले	मुली	एकूण
प्रथम	१८	११	१०	२	८	४	०	२	०	५०	१३	६३
द्वितीय	२४	२२	१२	३	११	२	०	०	०	५४	२०	७४
तृतीय	१८	२३	९	२	७	५	५	०	०	४९	२०	६९
चतुर्थ	३३	११	१०	४	११	३	०	०	१	५४	२७	८१

#### ५.२ निकालाचे वर्गीकरण :



चालू वर्षातील पदवीच्या चारही वर्गातील उत्तीर्ण विद्यार्थ्यांची संख्या

#### ५.३ Campus Placements

अ.क्र.	विद्यार्थ्याचे नाव	नोकरी मिळालेली संस्था
१.	भेलोंडे वैभव	Technoforce Solutions (I) Pvt. Ltd., Nasik
२.	खानविलकर शुभदा	Technoforce Solutions (I) Pvt. Ltd., Nasik
३.	केळकर वरद	Supreme Petrochem Ltd., Village Amdoshi, Nagothane
४.	बंदरकर नोमान	Supreme Petrochem Ltd., Village Amdoshi, Nagothane
५.	सुर्यवंशी मंदार	Supreme Petrochem Ltd., Village Amdoshi, Nagothane
६.	खांबे अंकित	Privi Organics Ltd., Mahad
७.	विधाते पृथ्वीराज	Privi Organics Ltd., Mahad

#### ६. अध्यापक व इतर कर्मचारी

##### अध्यापक

	डॉ. पी. व्ही. विजय बाबू प्राध्यापक, रसायन अभियांत्रिकी B.Tech NIT Warangal, 1984 M.Tech NIT Warangal, 1987 Ph.D., IIT Bombay, 1992		डॉ. विवेक साठे सहयोगी प्राध्यापक B.E (Chemical Engineering) Pune University M.Tech (Chemical Engineering) IIT, Bombay Ph.D IIT, Madras
	डॉ. योगेश महाजन सहयोगी प्राध्यापक B.E (Chemical Engineering) Mumbai University M.Tech (Chemical Engineering) IIT, Bombay Ph.D IIT, Bombay		प्रा. ए. एम. गुगल सहयोगी प्राध्यापक B.Tech (Chemical Engineering) LIT, Nagpur M.Tech (Petrochemical Engineering) LIT, Nagpur
	डॉ. अभिजित चव्हाण सहयोगी प्राध्यापक B.Tech (Petrochemical Engineering) Dr. BATU Lonere M.Tech (Chemical Engineering) IIT, Kanpur Ph.D IIT, Bombay		प्रा. सौ. सुवर्णा धोंगडे सहाय्यक प्राध्यापक B.Tech (Chemical Engineering) JDIT, Amaravati University M.Tech (Chemical Engineering) Dr.BATU Lonere
कंत्राटी अध्यापक			
	प्रा. शिवानंद चव्हाण सहाय्यक प्राध्यापक B.Tech (Chemical Engineering) Dr. BATU Lonere M.Tech (Chemical Engineering) NIT, Trichy		प्रा. अजय वानछोडे सहाय्यक प्राध्यापक B.E. (Chemical Engineering) JDIT, Yavatmal M.Tech (Chemical Engineering) NIT, Trichy

<b>इतर कर्मचारी</b>			
	श्री. बी. डी. बैरागी प्रयोगशाळा तंत्रज्ञ		श्री. वाय. एन. कांबळे प्रयोगशाळा तंत्रज्ञ
	श्री. एस. डी. पाटील प्रयोगशाळा तंत्रज्ञ		श्री. पी. बी. थळे शिपाई

#### ७. अध्यापकांकडे असलेल्या इतर जबाबदाऱ्या

##### डॉ. पी. व्ही. विजय बाबू

- १. Member of Academic Council
- २. Member Secretary, DBATU Act 2014 modification committee
- ३. Member Campus Development Committee
- ४. Coordinator, DBATU-GexCon Collaborative Program on Safety
- ५. Member, New Grading system drafting committee
- ६. Member of University Library Committee
- ७. Member of University Finance Committee
- ८. Convener of Industry, Institute Interaction Cell of the University
- ९. Chairman, BoS
- १०. Chairman, Research Committee in Chemical and Petrochemical Engineering
- ११. Member of Central Purchase Committee
- १२. Co-ordinator for committee to propose amendments in Rules and Regulations for Ph. D. Program

##### डॉ. व्ही.एस. साठे

- १. In-charge Finance Officer

##### डॉ. वाय. एस. महाजन

- १. Member of Statutes drafting committee
- २. Co-ordinator, DBATU-ICT collaborative research program in Chemical Engineering
- ३. Compered the University Convocation
- ४. Arranged workshop on Python and Latex for the benefit of students (February 2016)
- ५. Organized a FDP on Recent Trends in Energy Research, under TEQIP-II, 15

##### डॉ. ओ. आर. चव्हाण

- १. Member, University Annual Report Preparation Committee
- २. Co-ordinator, DST FIST Project

##### सल्लगार समिती

विभागातील शैक्षणिक कामकाजा संदर्भात मार्गदर्शन करण्यासाठी सल्लगार समितीची स्थापना करण्यात आली आहे. ही सल्लगार समिती विभागाचे शैक्षणिक परिक्षण करते तसेच शैक्षणिक अभ्यासक्रम व संशोधन यांच्या बाबतीत वेळोवेळी सूचना करीत असते. या समितीची रचना खालीलप्रमाणे आहे.

अ.क्र.	नाव व पदनाम	समितीतील पद
1.	Head, Chemical Engineering, DBATU, Lonere	Chairman
2.	Dr. Sanjay Mahajani, Professor, Chemical Engineering, IIT Bombay	Member
3.	Dr. Ashwin Patwardhan, Associate Professor, Chemical Engineering, ICT Mumbai	Member
4.	Dr. Ashish V. Orpe, Scientist, Chemical Engineering Division, NCL, Pune	Member
5.	Mr. D.M. Chati, Vice-President (Operations), Embio Ltd., Mahad	Member
6.	Mr. D.R. Degwekar, Vice-President (Operations), Excel Industries Ltd., Roha	Member
7.	Mr. S.B. Pathare, Executive Vice-President (Operations), Privi Organics Ltd., Mahad	Member

## अभ्यास मंडळ

अ.क्र.	नाव व पदनाम	समितीतील पद
1.	Head, Chemical Engineering, DBATU, Lonere	Chairman
2.	Dr. V.R. Patwardhan, Retired Scientist, Chemical Engineering Division, NCL, Pune	Member
3.	Two more members will be Co-opted by the above Committee	

## ९. अध्यापकांचे संशोधन कार्य

### शोधनिकंध / परिसंवाद

- Onkar A. Deorukhkar, Bipin S. Deogharkar, Yogesh S. Mahajan, Purification of tetrahydrofuran from its aqueous azeotrope by extractive distillation: Pilot plant studies, Chemical Engineering and Processing 105 (2016) 79–91
- Ravindra B Sholapurkar, Yogesh S Mahajan, Calculation of power generation by rooftop wind turbine an experimental study, Indian Journal of Energy, 5(1) (2016) 1 – 12
- Ravindra B Sholapurkar, Yogesh S Mahajan, Review of Wind Energy Development and Policy in India, (2015) Review of Wind Energy Development and Policy in India, Energy Technology & Policy, 2:1, 122-132, DOI: 10.1080/23317000.2015.1101627
- Ravindra B Sholapurkar, Yogesh S Mahajan, Impact of Atmospheric Parameters on Power Generation of Wind Turbine, American Journal of Energy Engineering, 2016; 4(2): 17-25, doi: 10.11648/j.ajee.20160402.12

## १०. प्रयोगशाला

### प्रयोगशालेतील महत्वाची उपकरणे

अ.क्र.	उपकरणाचे नाव	किंमत
1	HPLC (High Performance Liquid Chromatograph)	Rs. 16,92,000/-
2	GPC (Gel Permeation Chromatograph)	Rs. 19,00,000/-
3	Prep-LC (Prepartive Liquid Chromatograph)	Rs. 17,00,000/-
4	HPTLC (High Performance Thin Layer Chromatograph)	Rs. 17,50,000/-
5	FTIR (Fourier Transform Infra Red Spectrometer)	Rs. 12,00,000/-
6	TGA-DSC (Thermo Gravimetry Analyzer and Differential Scanning Calorimeter)	Rs. 12,50,000/-
7	Brookfield Viscometer	Rs. 1,50,000/-
8	Gas Chromatograph	Rs. 3,60,000/-
9	Gas Chromatograph	Rs. 3,90,000/-
10	Karl Fischer Titrator	Rs. 1,85,000/-
11	Emerson UPS-1 + Batteries	Rs. 1,04,000/-
12	Emerson UPS-2 + Batteries	Rs. 1,05,000/-

13	UV-Visible Spectrometer	Rs. 4,00,000/-
14	Refrigerated Centrifuge	Rs. 5,20,000/-
15	Focused microwave for synthesis	Rs. 21,60,000/-
16	Nitrogen Generator	Rs. 9,95,625/-
17	Diffused Microwave Reactor	Rs. 9,90,000/-
18	Reactor Assembaly for low temperature reaction	Rs. 1,99,660/-
19	Batch Reactor Assembly	Rs. 2,30,625/-
20	Analytical Weighing Balance	Rs. 1,84,275/-
21	Ultrasonic Reactor	Rs. 2,63,350/-

## ११ संशोधन प्रकल्प :

### ११.१ पदवी स्तरावरील संशोधन प्रकल्प

अ.क्र.	प्रकल्प
1	Production of Bisphenol A
2	Vapor liquid equilibrium for binary system
3	Simulation of thermochemical cycle
4	Batch kinetics of propionic acid and iso-amyl alcohol (liquid esterification)
5	Vapor liquid equilibrium using ASPEN simulation
6	Separation of glucose and fructose by adsorption
7	Biodiesel production from Algae
8	Design of Prilling Tower
9	Design of Distillation Column
10	Increasing the concentration of 136-Naphthalene trisulfuric acid
11	Study on microbial fuel cell using kitchen waste water as substrate
12	Manufacturing of Dye

### ११.२ पदव्युत्तर स्तरावरील प्रकल्प

अ.क्र.	प्रकल्प
1	Green Synthesis of AgNP
2	Production of oxalic acid from molasses
3	Kinetic study of esterification reaction of acrylic acid with n-butanol over amberlite
4	Synthesis of methyl butyrate by esterification of butyric acid with methanol using amberlyst-15
5	Production of silica from rice husk ash
6	Isolation and Characterization of Bacteria from oil contaminated soil to produce biosurfactant
7	Modeling and simulation for lactic acid production using suitable micro organisms
8	Modeling and simulation of reactive distillation column for the production of ethyl acetate of highly purity using ASPEN PLUS
9	Optimization of divided wall distillation column using ASPEN PLUS
10	Effect of magnetic field on crystallization of calcium carbonate
11	Synthesis of 2-ethyl hexyl laurate by esterification of lauric acid with 2-ethyl hexanol using amberlyst-15

12	Simulation of separation of tetrahydrofuran from its aqueous azeotrope using reactive distillation
13	Esterification of veleric acid with methanol by using amberlyst-15
14	Synthesis of tetrahydrofuran from 1,4-butanediol using reactive chromatography
15	Effect of solvent on particle size of aceclofenac drug using liquid antisolvent technique

## १२. पीएच.डी. अभ्यासक्रम

### १२.१ पीएच.डी. अभ्यासक्रमाचे विद्यार्थी

Sr.No.	Name of the Candidate	Status
1	Mr. N. R. Jawade	Completed
2	Mr. M.W. Barwe	Submitted
3	Mr. V. D. Talnikar	Submitted
4	Mr. R. B. Sholapurkar	Ongoing
5	Mr. R. B. Bhandare	Ongoing
6	Mr. O. A. Deorukhkar	Ongoing
7	Mrs. S. S. Metkar	Ongoing
8	Mr. A. K. Bandsode	Ongoing
9	Mr. S. V. Ranade	Ongoing
10	Mr. Anil Ranveer	Ongoing
11	Mr. S. B. Bobde	Ongoing
12	Mr. P. V. Giri	Ongoing

## १३. विविध परीक्षांमधील विद्यार्थ्यांचे यश :

### GATE २०१६ विद्यार्थ्यांचे यश :

अ.क्र.	विद्यार्थ्यांचे नाव	मिळविलेले गुण
1	Mr. Nishad Kadam	35.33
2	Miss. Saroj Gawas	34.67

## १४ औद्योगिक उपक्रमांना अभ्यास भेट :

विभागामार्फत विद्यार्थ्यांसाठी MRPL, बैंगलोर येथे अभ्यासभेट आयोजित केली होती.



## १५. TEQIP योजने अंतर्गत विभागाने आयोजित केलेले परिसंवाद, कार्यशाळा व प्रशिक्षण शिविर

- 1) Arranged workshop on Python and Latex for the benefit of students (February 2016)
- 2) Organized a FDP on Recent Trends in Energy Research, under TEQIP-II, Dec. 2015

## १६. विभागाने आयोजित केलेले इतर उपक्रम :

Chemfraternity 2016: The Department of Chemical Engineering conducted a state level Techfest during March 18-20, 2016. About 120 students from different Engineering colleges in Maharashtra and the students of Dr. Babasaheb Ambedkar Technological University participated in different programs like technical paper and poster presentations, Industrial problem solving, etc.

GATE coaching: Every year the Department of Chemical Engineering conducts GATE guidance classes for the students of Chemical and Petrochemical Engineering. Two students from Chemical Engineering have obtained valid GATE score at GATE 2016. GATE score is essential for securing jobs in public sector companies like HPCL, IPCL, BPCL, etc.

World Water Day Celebrations: Every year the Department of Chemical Engineering conducts WorldWater Day on March 22. We invite nearby school children to participate in quiz and elocution competitions and also to spread awareness of water conservation through them. This year also the Department of Chemical Engineering celebrated World Water Day with great zeal.

Industrial Exposure and Training programs: As per the curriculum requirements the students of 2<sup>nd</sup> year B.Tech have to undergo two weeks industrial exposure program during the summer vacation in a processing industry. Similarly, the students of 3<sup>rd</sup> year B.Tech will have to undergo four weeks of industrial training in any chemical process industry during summer vacation. These programs will be highly useful for students to better understand theoretical aspects of Chemical Engineering. During the last summer vacation about 140 students have undergone above programs.

Training Program on Process Simulation: About 16 M.Tech students have attended one week training program on Process Simulation at NIT Warangal during the month of May 2016. This training program has been found to be highly useful for the M.Tech student to understand Chemical Process Designs.

Industrial Tour: The Department of Chemical Engineering organized an industrial tour for 3<sup>rd</sup> year B.Tech students during 27<sup>th</sup> September to 2<sup>nd</sup> October 2015. They have visited Mangalore Refineries and Petrochemicals Ltd. plant at Mangalore.

Industrial Visits: Every year the Department conducts industrial visits for students of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, final year B.Tech and M.Tech students. Students are taken to nearby industries in Mahad, Roha and Loteparshuram to show them different chemical engineering operations and processes.

## १७. CYNOSURE 2K16



## १८. विभागाची बलस्थाने, कमतरता, संधी व आव्हाने

### बलस्थाने

- Highly dedicated and motivated faculty members
- Good supporting staff
- Disciplined students

### कमतरता

- Insufficient faculty availability
- Insufficient space

### संधी

The department of Chemical engineering maintains excellent rapport with nearby industrial houses, viz. MIDC Mahad, MIDC Roha, MIDC Lote Parshuram, and MIDC Patalganga. In view of this there is a

- (1) Good scope for consultancy work and IRG
- (2) Good scope for collaborative projects
- (3) Good scope for expansion of the department

### आव्हाने

- Managing all Departmental activities with the help of available faculty members.
- Recruitment of qualified faculty members having Ph.D. qualifications
- Managing with rural environment



## स्थापत्य अभियांत्रिकी विभाग



डॉ. एस.एम. पोरे

सहयोगी प्राध्यापक आणि विभाग प्रमुख

### विभाग प्रमुखांचा संदेश

सन २०१५-१६ चा वार्षिक अहवाल सादर करताना मला अत्यंत आनंद होत आहे. सन २००८-०९ ला पेरलेली बीजे विकसित होऊन त्याची आज बीजाकुरे झाली आहेत आणि मला खात्री आहे की विभागाची प्रगती विद्यापीठाच्या इतिहासात महत्वाची नोंद करेल. असे म्हटले जाते की, कोणत्याही मोठ्या गोष्टीची सुरवात ही लहानशया गोष्टीने होत असते आणि हा विभाग याला अपवाद नाही. सन २००८ ला ६० विद्यार्थी संख्येने सुरवात करून, आजमीला ३२० स्थापत्य अभियंते देशाच्या सेवेत विविध क्षेत्रात कार्यरत आहेत. प्रथम तुकडीपासूनच विभागामार्फत विद्यार्थ्यांना कॅम्पस प्लेसमेंट व विविध माध्यमातून नोकरी मिळाण्याकरिता सर्वतोपरी सहकार्य करण्यात येते. मला सांगताना अभिमान वाटतो की, विभागातून उत्तीर्ण झालेल्या जवळपास सर्व विद्यार्थ्यांना नोकरी मिळालेली आहे. भारतीय प्रौद्योगिक संस्था, राष्ट्रीय प्रौद्योगिक संस्था आणि राज्यातील इतर महत्वाच्या अभियांत्रिकी महाविद्यालयात काही विद्यार्थी उच्चशिक्षण घेत आहेत. उपलब्ध मर्यादित सुविधेत विद्यार्थ्यांच्या संयम आणि उत्साहपूर्ण सहकाऱ्याने आज विभागाने सक्षमरित्या एक पाऊल पुढे टाकले आहे आणि आपली विद्यापीठामध्ये एक वेगळी ओळख निर्माण केली आहे राज्यविद्यापीठाची अधिकृत मान्यता मिळाल्यानंतर विभागातील प्रत्येक सदस्याचे मनोरूप निश्चितत्व उंचावेल. सन २०१२ मध्ये विभागात पी.ए.च.डी. अभ्यासक्रमाला सुरवात झाली. ५ विद्यार्थी संशोधक स्थापत्य अभियांत्रिकी क्षेत्रातील संरचना व पदार्थ अभियांत्रिकी या विषयावर आपले संशोधन करीत आहेत. TEQIP अंतर्गत पूर्णवेळ पी.ए.च.डी. विद्यार्थ्यांना शिष्यवृत्ती

उपलब्ध करण्यात आली आहे. पदवी अभ्यासक्रमाची रचना करताना आखिल भारतीय तंत्रशिक्षण परिषदेच्या नमुना अभ्यासक्रम, इतर विद्यापिठांचा अभ्यासक्रम व भारतीय उद्योगाची आजची गरज लक्षात घेतली आहे. पदवी धारकांना सक्षम, मुलभूत तत्त्वांवर आधारित व्यावसायिक बनविणे हा उद्देश विभागाच्या केंद्रस्थानी आहे.

विविध संशोधनात्मक प्रकल्पासाठी AICTE, UGC, TEQIP व राज्य शासनाकडून भरपूर निधी उपलब्ध झालेला आहे. शैक्षणिक गरजा पूर्ण करण्याकरिता विभागाला पायाभूत प्रयोगशाळांची गरज आहे. स्थापत्य अभियांत्रिकीतील आजच्या गरजेनुसार संशोधन करण्याकरिता आवश्यक असलेली पार्श्वभूमी अध्यापकांमध्ये आहे.

विभागाचे अनेक विद्यार्थी हे स्पर्धात्मक परीक्षा उदा. GATE, MPSC, UPSC व तत्सम परीक्षेमध्ये यशस्वी झाले आहेत. काही विद्यार्थी उच्चशिक्षणासाठी विदेशात गेले आहे व शैक्षणिक उपक्रमांतर्गत तृतीय वर्षाचे विद्यार्थी उन्हाळी सुटीमध्ये नामंकित औद्योगिक क्षेत्रात औद्योगिक प्रशिक्षण घेतात. याकरिता सार्वजनिक बांधकाम विभाग, जलसंपदा विभाग, जिल्हापरिषद आणि इतर नामंकित खाजगी उद्योग विभागाला सकारात्मक प्रतिसाद देतात. विभागामध्ये नियमितपणे विविध कार्यशाळा, प्रशिक्षण शिबिरे, परिसंवाद, तज्ज्ञ व्यक्तिंची व्याख्याने सातत्याने आयोजित केली जातात.

– डॉ. सचिन पोरे

## दृष्टिकोन

तांत्रिक ज्ञान व कौशल्याचा विद्यार्थ्यांच्या शैक्षणिक तसेच औद्योगिक, सामाजिक आणि देशाच्या प्रगतीकरीता प्रसार करणे. ध्येय

आधुनिक विज्ञान व तंत्रशास्त्र विकासाला अनुसरून उत्तम दर्जाचे अभियांत्रिकी शिक्षण प्रदान करणे.

## विभागाची माहिती

विभागामार्फत पदवी अभ्यासक्रम आणि पीएच.डी. (Ph.D.) अभ्यासक्रम राबविले जातात. अर्धवेळ आणि १ पूर्णवेळ पीएच.डी विद्यार्थ्यांनी नोंदणी केलेली आहे.

## संशोधक

### संध्या

- २८९ पदवी अभ्यासक्रमातील विद्यार्थी.
- २ नियमित आणि ७ करार पद्धतीने पूर्ण वेळ शिक्षक, ५ शिक्षकेत्तर कर्मचारी.
- ११०० वर्ग मीटर जागा, ८ सुसज्ज प्रयोगशाळा, २ पदवी अभ्यासक्रमाकरिता वर्गखोल्या, १ पीएच.डी करिता खोली.
- १५ मोठी व ९८७ लहान उपकरणे.
- ६ नियतकालिकांमध्ये व ४८ संमेलनामध्ये शोधनिबंध प्रकाशित.
- २८ विद्यार्थी विभाग व विद्यापीठामार्फत नोकरीमध्ये समाविष्ट व उर्वरित विद्यार्थ्यांना नोकरी मिळण्यास सहकार्य.
- २० कन्सल्टन्सी प्रकल्प, ३१ पदार्थ चाचणीची कामे.
- अखिल भारतीय तंत्रशिक्षण परिषदेमार्फत पायाभूत सुविधा उभारणीच्या प्रस्तावास दोन कोटी रुपयाची मान्यता.

## उद्दिष्ट आणि निष्पत्ती

### शैक्षणिक उपक्रमाची उद्दिष्टे

- विद्यार्थ्यांना तंत्रशास्त्र शाखेमध्ये सक्षम बनविणे जेणेकरून हे विद्यार्थी पदव्युत्तर पदवी अभ्यासक्रम किंवा उद्योग क्षेत्र,
- संशोधन व विकास संस्थेत स्थापत्य अभियांत्रिकी क्षेत्रातील नवीनतम तंत्रज्ञानामध्ये यशस्वी होतील.
- विद्यार्थ्यांचा वैज्ञानिक व अभियांत्रिकीमध्ये लागणाऱ्या मुलभूत तत्त्वांचा पाया भक्षण करणे.
- बदलत्या उद्योगांच्या गरजा लक्षात घेऊन व वास्तविक समस्यांचे निराकरण करण्यास विद्यार्थ्यांना सक्षम करणे.
- विद्यार्थ्यांना व्यावसायिक व नैतिक, प्रभावी संभाषण कौशल्य, नेतृत्व, संघटनवृत्ती आणि जबाबदार नागरिक बनवणे.

## उपक्रमाची निष्पत्ती

- उद्योगक्षेत्रातील विविध समस्यां ओळखुन त्याचे निराकरण करण्यासाठी विज्ञान व अभियांत्रिकीचे मूलभूत ज्ञान पदवीधारकांकडे असेल.

- स्थापत्य अभियांत्रिकी उद्योग क्षेत्रातील समस्यांचे निराकरण करण्यासाठी विविध उपलब्ध पद्धती समजण्याची क्षमता पदवीधारकांकडे असेल.
- पदवीधारकांना स्थापत्य अभियांत्रिकी क्षेत्रातील प्रगत व उदयोन्मुख विषयाचे ज्ञान अवगत असेल.
- पदवीधारकांना क्षेत्रातील वास्तविक समस्यांचे विश्लेषण करून समाधान करण्याकरिता आधुनिक अभियांत्रिकीची साधने, संगणकाची आज्ञावली व उपकरणे वापरण्याचे ज्ञान व कौशल्य असेल.
- पदवीधारकांना पर्यावरण, आर्थिक व सामाजिक क्षेत्रावर स्थापत्य अभियांत्रिकीच्या प्रभावाचा व्यापक अर्थबोध व समकालीन समस्यांची जाणीव असेल.
- पदवीधारकांना अभियांत्रिकी क्षेत्रातील नवीनतम कल्पनांची देवाणघेवाण करण्याचे आवश्यक कौशल्य अवगत असेल.
- पदवीधारकांना विभिन्न क्षेत्रातील संघटनासोबत सहयोग व कार्य करण्याची क्षमता अवगत असेल.
- व्यावसायिक व नैतिक जबाबदारीची जाणीव प्रदर्शित करतील.

### विद्यार्थी सांख्यिकी माहिती

सन २०१५-१६ नोंदणी अहवाल

वर्ष	खुला		अ.जाती		अ.जमाती		इ.मा.व.		वि. जाती		वि.मा.प्र.		एकूण		एकूण
	पु.	स्त्री	पु.	स्त्री	पु.	स्त्री	पु.	स्त्री	पु.	स्त्री	पु.	स्त्री	पु.	स्त्री	
प्रथम	२०	०४	०३	०३	०४	०१	१४	०२	०६	०३	०१	००	४८	१३	६१
द्वितीय	१९	०५	०७	०३	०१	०१	२३	०७	०७	०२	०२	०१	५७	१९	७८
तृतीय	१९	०७	०७	०५	०४	०१	१२	०६	०९	०२	००	००	५१	२१	७२
चतुर्थ	२५	०८	०५	०४	०४	००	१८	०५	०६	०२	०१	००	५९	१९	७८

२०१५-१६ परीक्षेतील कामगिरी

वर्ष	CGPA				अनुत्तीर्ण	एकूण
	६५ पेक्षा कमी	६५-८	८-९	९-१०		
प्रथम	०७	२३	११	०१	२०	६२
द्वितीय	००	२७	११	०५	४२	८५
तृतीय	०९	२६	११	०१	१६	६३
चतुर्थ	२१	३६	०७	०१	१५	८०

### सल्लगार मंडळ आणि अभ्यास मंडळ

स्थापत्य अभियांत्रिकी विभागामध्ये चालणाऱ्या घडामोर्डीवर वेळोवेळी लक्ष देऊन मार्गदर्शन करण्याकरिता सल्लगार मंडळाची स्थापना करण्यात आली आहे. सल्लगार मंडळाकडे विभागाचे शैक्षणिक लेखापरिक्षण, गतिमान अभ्यासक्रम सुचविणे तसेच संशोधन कार्यासाठी माहिती उपलब्ध करण्याची जबाबदारी सोपवण्यात आली आहे.

अ.क्र.	नाव	पद	संस्था
१	डॉ. एस.एम. पोरे	सहयोगी प्राध्यापक आणि विभाग प्रमुख	स्थापत्य अभियांत्रिकी विभाग डॉ.बा.आं. तंत्रशास्त्र विद्यापीठ
२	डॉ. विपुल प्रकाश	प्राध्यापक (स्थापत्य अभियांत्रिकी विभाग)	भारतीय प्रौद्योगिक संस्था, रुकी २४७६६७

वार्षिक अहवाल २०१५ - २०१६

३	डॉ. पी. एच. सावंत	संचालक	सरदार पटेल कॉलेज ऑफ इंजिनियरिंग, अंधेरी (प.) मुंबई ५८
४	श्री. खलिल अंसारी	मुख्य अभियंता, कोकण विभाग	जलसंपदा विभाग, महाराष्ट्र शासन
५	आर.यु. वसईकर	कार्यकारी अभियंता	सार्वजनिक बांधकाम विभाग, महाराष्ट्र शासन, पालघर विभाग
६	के. के. हांडे	संचालक (QS)	कॅप्साईट इन्फ्राप्रोजेक्ट प्रा. लि.
७	डॉ. एस. आर. भगत	सहयोगी प्राध्यापक	स्थापत्य अभियांत्रिकी विभाग डॉ. बा. आं. तंत्रशास्त्र विद्यापीठ

### सल्लागार मंडळ आणि अभ्यास मंडळ

विभागाकडे अध्ययन विषयक / शैक्षणिक देखरेख, नियंत्रण आणि पदवी व पदव्युत्तर पदवी अभ्यासक्रम बनवण्याची जबाबदारी सोपविण्यात आली आहे. अभ्यासमंडळ आखिल भारतीय तंत्रशिक्षण परिषद (AICTE) आणि विद्यापीठ मान्यता आयोगाच्या (UGC) अनिवार्य गरजां संदर्भात तसेच तंत्रज्ञान क्षेत्रातील नवीनतम घडामोडी आणि उद्योग पद्धतींवर कार्यरत आहे.

अ.क्र.	नाव	पद	संस्था
०१	डॉ. एस.एम. पोरे	सहयोगी प्राध्यापक आणि विभाग प्रमुख	स्थापत्य अभियांत्रिकी विभाग डॉ.बा.आं. तंत्रशास्त्र विद्यापीठ
०२	डॉ. पी. एच. सावंत	संचालक	सरदार पटेल कॉलेज ऑफ इंजिनियरिंग, अंधेरी वेस्ट, मुंबई ५८
०३	प्रा. एम.बी. कुमठेकर	प्राध्यापक, स्थापत्य अभियांत्रिकी	शासकीय अभियांत्रिकी महाविद्यालय, कराड
०४	डॉ. डिडि. सरोदे	सहयोगी प्राध्यापक, स्थापत्य अभियांत्रिकी विभाग	ICT मुंबई
०५	डॉ. एस. आर. भगत	सहयोगी प्राध्यापक	स्थापत्य अभियांत्रिकी विभाग, डॉ. बा. आं. तंत्रशास्त्र विद्यापीठ

### प्रयोगशाळांसाठी गुंतवणूक

अ. क्र.	प्रयोगशाळेचे नाव	किंमत (रु.)
१.	सर्वे प्रयोगशाळा	७,८२,२७८.००
२.	कॉक्रिट प्रयोगशाळा	१२,१८,३५५.००
३.	जिओटेक्निकल/सॉइल प्रयोगशाळा	१०,५९,५२४.००
४.	हायड्रोलॉजी प्रयोगशाळा	१,२२,०६२.००
५.	संगणकीय प्रयोगशाळा	९,२०,९८९.००
एकूण		४१,०३,२०८.००

### ५. प्रयोगशाळेतील मुख्य उपकरणे

अ.क्र.	उपकरणाचे नाव	संख्या	रकम	खरेदी दिनांक
१.	Combined set up to demonstrate Bernoulli's Theorem & Type of Flow on the basis of Reynold's number	०१	७१,२५०.००	१४.१२.२०१०
२.	Precision Direct Reading Vernier Theodolite	०५	६२,५००.००	०४.०२.२०११
३.	HP Pro Desktop SFF 2110, E7500/2GB DDR3 RAM/320 GB HDD/Key board optical mouse	१५	४,०९,५००.००	०१.०४.२०११

४.	Trimble M3-5" Total Station	०१	४,७५,९६५.००	१५.०४.२०११
५.	Direct Shear Outfit with Electronic Loading Unit	०१	४,३५,४९०.००	२१.०३.२०१३
६.	Motorized Sieve Shaker with built in Digital Timer. Standard sets of sieves	०१	१,८०,१३६.००	२१.०३.२०१३
७.	Automatic Compression Testing machine 3000 KN	०१	११,७३,४९७.००	२७.०३.२०१३
८.	Unconfined Compression Test Apparatus	०१	९०,०४६.००	२१.०३.२०१३
९.	Multi Media Projector	०३	१,०२,१९५.००	०५.१०.२०१५
१०.	HP 400G1 All in one Desktop computer	०६	२,३३,१००.००	०५.११.२०१५

#### ६. विभागात अस्तित्वात असलेल्या प्रयोगशाळा

Concrete Technology

Hydraulics

Building Construction

Engineering Geology



400 Samples of Rocks & Minerals, 150 Models, 150 Charts a complete collection in Engineering Geology Laboratory

#### Conventional Instruments in Surveying (345 No.)



Conventional Surveying Instruments, Compression Testing Machine, Two Tailor-made Hydraulic Benches catering need of 05 Experiments

#### ७. शिक्षक आणि कर्मचारी

<b>डॉ. सचिन एम. पोरे</b> बी.ई. (शिवाजी विद्यापीठ, कोल्हापूर) एम.ई. (शिवाजी विद्यापीठ, कोल्हापूर) पीएच.डी. (भारतीय प्रौद्योगिकी संस्था, रुक्की) अनुभव - १९ वर्षे		<b>डॉ. सारीपुत्र आर. भगत</b> बी.ई. (अमरावती विद्यापीठ, अमरावती) एम.टेक. (भारतीय प्रौद्योगिक संस्था, दिल्ली) पीएच.डी. (भारतीय प्रौद्योगिकी संस्था, रुक्की)	
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<b>कृ. आकांक्षा ए. दर्गे</b> बी.टेक (डॉ. बा.आं. तंत्रशास्त्र विद्यापीठ, लोणेरे) एम.ई. (सावित्रीबाई फुले पुणे विद्यापीठ, पुणे अनुभव - ३ वर्षे		<b>कृ. प्रियंका पी. मोहिरे</b> बी.एस्सी.,एम.एस्सी (भुगर्भशास्त्र)(सावित्रीबाई फुले पुणे विद्यापीठ, पुणे) अनुभव - ३ वर्षे	
<b>श्री. प्रसाद जी. सोनार</b> बी.टेक (डॉ. बा. आं. तंत्रशास्त्र विद्यापीठ, लोणेरे) अनुभव - २ वर्षे		<b>श्री. राहुल बी. येंडोळे</b> बी.टेक (डॉ. बा. आं. तंत्रशास्त्र विद्यापीठ, लोणेरे) अनुभव - २ वर्षे	
<b>श्री. किरण बी. ठोंबरे</b> बी.टेक (डॉ. बा. आं. तंत्रशास्त्र विद्यापीठ, लोणेरे) अनुभव - २ वर्षे		<b>श्री. प्रविण एस. पवार</b> बी.टेक (डॉ. बा. आं. तंत्रशास्त्र विद्यापीठ, लोणेरे) अनुभव - १ वर्षे	
<b>श्री. रणजित एन. कोरे</b> बी.टेक (डॉ. बा. आं. तंत्रशास्त्र विद्यापीठ, लोणेरे) अनुभव - १ वर्षे		<b>श्री. प्रशांत आर. जगताप</b> बी.ई., एम.ई. (शिवाजी विद्यापीठ, कोल्हापूर) पी.एच.डी. (सद्यस्थितीत सुरु, डॉ. बा. आं. तंत्रशास्त्र विद्यापीठ, लोणेरे) अनुभव - ५ वर्षे	
<b>सहाय्यक कर्मचारी</b>			
<b>श्री. गोविंद व्ही. जाधव</b> प्रयोगशाळा सहाय्यक बी.ए., एम.ए. (डॉ. बा. आं. मराठवाडा विद्यापीठ, औरंगाबाद) अनुभव - ७ वर्षे		<b>श्री. संदेश एम. जांभरे</b> बी.एस्सी. (मुंबई विद्यापीठ) अनुभव - २ वर्षे	

# indicates faculty on contract basis, \$ indicates staff on contract basis

#### ८. शिक्षकांचे योगदान :

- १) विभागाचा NAAC Peer Team, दिनांक ०४ फेब्रुवारी ते ०७ फेब्रुवारी २०१५ च्या भेटीच्या तयारीमध्ये उत्साहपूर्ण सहभाग. NAAC बंगळुर तर्फे विद्यापीठास श्रेणी 'ब' चा दर्जा.
- २) विद्यापीठाच्या ISO प्रमाणनासाठी विभागाची महत्वपूर्ण भूमिका.
- ३) डॉ. पोरे यांनी महाराष्ट्र शासनाची एकदिवसीय कार्यशाळा 'जल-जागृति अभियान' आयोजित केली. जलसंपदा विभागाचे अधिकारी, अधिक्षक अभियंता श्री. काळोखे, कार्यकारी अभियंता सौ. राजभोज, श्री. गोडसे, श्री. गवळे यांनी 'जल व्यवस्थापन आणि संवर्धन' यांवर उत्तम सादरीकरण केले.
- ४) सन्माननीय जिल्हाधिकारी, रायगड यांच्यातर्फे डॉ. पोरे यांची 'जल-संवर्धन आणि व्यवस्थापनाच्या' जिल्हास्तरीय समितीमध्ये सदस्य म्हणून निवड केलेली आहे.

#### ९. सचिन एम. पोरे

- १) डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठाच्या विविध प्रशासकीय समितीमध्ये कार्यरत. उदा. शैक्षणिक परिषद, बांधकाम समिती, अँटी-रॅगिंग कमिटी इ.

- २) पुणे विद्यापीठाच्या विद्यार्थ्यांसाठी पदव्युत्तर पदवी प्रबंध परीक्षाकरिता बाह्य परिक्षक म्हणून कार्यरत.
- ३) स्थापत्य अभियांत्रिकी, विद्युत अभियांत्रिकी आणि दूरसंचार अभियांत्रिकीच्या विद्यार्थ्यांमार्फत राजभवन नागपुर येथे संगीतयुक्त कारंजाची योजना, आराखडा व प्रत्यक्ष कारंजा बनविला.
- ४) जिल्हाधिकारी रायगड यांच्यातर्फे 'जलयुक्त शिवार योजना, रायगडच्या तांत्रिक महालेखा परिक्षणाची जबाबदारी करिता कार्यरत.
- ५) भारतीय विमानतळ प्राधिकरणामार्फत, सांब्रा, बेळगावी येथील बेळगावी विमानतळाच्या विकासाकरिता संरचना सल्लागार म्हणून कार्यरत.
- ६) राज्य सरकारचा सार्वजनिक बांधकाम विभाग व जिल्हापरिषदच्या बहुसंख्या प्रकल्पांकरिता तांत्रिक सल्लागार म्हणून कार्यरत.
- ७) डॉ. बा. आंबेडकर तंत्रशास्त्र विद्यापीठसाठी प्रयोगशाळा कॉम्प्लेक्सचा रुपये दोन कोटीचा प्रकल्प आराखडा व बांधकाम यशस्वीपणे हाताळून प्रकल्प पूर्ण. सर्व महत्वाची कागदपत्रे विद्यापीठास सोपवली आहेत.

#### **डॉ. सारीपुत्र आर. भगत**

- १) सदस्य, उद्योग-संस्था संवाद कक्ष (TEQIP - II)
- २) सदस्य, बांधकाम समिती (TEQIP - II)
- ३) सदस्य, विद्यापीठ समिती, राष्ट्रीय उच्चतर शिक्षा अभियान (RUSA), २०१५.
- ४) सदस्य, विद्यापीठ वार्षिक अहवाल समिती.
- ५) प्रकल्प अधिकारी, बांधकामे व पर्यावरण व्यवस्थापन (TEQIP - II)
- ६) कॉक्रिट प्रयोगशाळा, जिओटेक्निकल प्रयोगशाळा आणि पर्यावरण अभियांत्रिकी प्रयोगशाळेमार्फत पदार्थ चाचणी आणि गुणवत्ता नियंत्रण सेवेत उत्साहपूर्ण सहभाग.
- ७) स्थापत्य अभियांत्रिकीच्या अभ्यासमंडळाचे सदस्य.
- ८) पदव्युत्तर पदवी, पदवीच्या प्रोजेक्ट आणि सेमिनारचे संनियंत्रक.

#### **शिक्षक संशोधने आणि प्रकाशने**

- 1) P. R. Jagtap, S. M. Pore, Vipul Prakash (2015), "Necessity of Strengthening of Steel Structures with FRP Composites: a Review" International Journal of Latest Trends in Engineering and Technology, ISSN 2278-621X, Volume 5, Issue 4, July 2015, PP. 390-394.
- 2) A. A. Darge, S. J. Mane (2015), "Treatment of Industrial Waste Water by Using Banana Peels and Fish Scales", International Journal of Science and Research, ISSN 2319-7064, Volume 4, Issue 7, July 2015.
- 3) Prasad Sonar, P. R. Minde, S. R. Bhagat, S. S. Pusadkar (2016), "Improvement of Bearing Capacity by Skirted Foundation", International Journal of Emerging Technology and Applications in Engineering, Technology & Science, ISSN 2319-7064, Volume 9, Issue 1, PP. 603-608.
- 4) Ambekar O. D., Jadhav H. S. (2016), "Bursting Stresses in Beam Column Joint Analysed and Designed as per Indian Standards", Int. Journal of Science and Research, ISSN 2319-7064, Volume 6, Issue 6.
- 5) Thombre K.B., More A.B., and Bhagat S.R. (2016), "Effect of Replacement of Natural Sand by Grit on Workability of Concrete", 2nd National Conference on Innovations in Civil Engineering, January 08-09, 2016 organised by Government College of Engineering, Karad.
- 6) Nikam Shubhangi, Bhagat S.R. (2016), "Dynamic Behavior of Underground Structures during Earthquake: A Critical Review", 2nd National Conference on Innovations in Civil Engineering, January 08-09, 2016 organised by Government College of Engineering, Karad.
- 7) Prasad Sonar, S. R. Bhagat, S. M. Pore (2016), "Hydrological Measurement of Rainfall". National Conference on Technical Revolution (NCTR- 2016), March 10-11, 2016, jointly organized by Savitribai Phule Pune University & Akhil Bhartiya Maratha Shikshan Parishad's Anantrao Pawar College of Engineering & Research, Parvati, Pune.
- 8) Ambekar O. D., Jadhav H. S. (2016), "Analysis and Design of Beam Column Joint", Proceeding of International Conference on Advances in Civil Infrastructure and Development of Smart Cities (ICACIDS-2016), February 27-28, 2016 organised by R.I.T. Sakharale.
- 9) Patil M. S., Attar A. C. (2016), "Review on Soil Stabilization Techniques Using Industrial Wastes", Proceeding of International Conference on Advances in Civil Infrastructure and Development of Smart Cities (ICACIDS-2016), February 27-28, 2016 organised by R.I.T. Sakharale.
- 10) Patil M. S., Attar A. C. (2016), "Experimental Feasibility Study of Foundry Sand Based Geopolymer as a

## ९. विद्यार्थ्यांसाठी औद्योगिक भेटी



Study of Ancient Stone Masonry at Khidrapur TempleVisit to construction site at Mangaon (Ferro-concreting)

## १०. विद्यार्थी सहभाग

### १०.१ सर्वोत्तम पद्धती (Best Practices)

- १) तृतीय वर्षाच्या अभ्यासक्रमातच विद्यार्थ्यांना शेवटच्या वर्षांसाठीच्या औद्योगिक क्षेत्र पुरस्कृत प्रकल्पांसाठीच्या कामांत प्रोत्साहित करणे. त्यामुळे विद्यार्थ्यांना औद्योगिक साधनांची ओळख निर्माण होऊन त्याबद्दलचे ज्ञान विकसित होण्यास मदत होते. त्या अनुषंगाने विभागाला उत्तम सहकार्य होते.
- २) विभागाच्या सार्वजनिक बांधकाम विभाग, रेल्वे, जलसंसिंचन, जिल्हा परिषद व महाराष्ट्र शासन आणि भारत सरकारच्या तत्सम स्थापत्य अभियांत्रिकी विभागांशी असलेल्या संपर्कामुळे विद्यार्थ्यांना औद्योगिक प्रशिक्षणासाठी उत्तम संधी उपलब्ध होते.
- ३) स्पर्धात्मक परिक्षांना सामोरे जाण्याकरिता प्रथम तुकडीपासून पेरलेली उत्तेजनाच्या बीजांमुळे १०० टक्के विद्यार्थी GATE मध्ये सहभागी होतात आणि ही पद्धत सद्यस्थितीत सुरु आहे.

### १०.२ सन २०१५-१६ मधील पदवी अभ्यासक्रम प्रकल्प नावांची यादी

1. Portable Penetrometer
2. An Evaluation of Drinking Water Against the Drinking Water Standards and Remedial Measures
3. Comparative Study of Standard Gauge Over Broad Gauge with Indian Perspective
4. Assessment of Works under “Jalyukta Shivar Abhiyaan”
5. Utilization of University Canteen Waste for the Production Of Biogas
6. Soil Stabilization
7. Red Mud Concrete
8. Manufacturing of Bricks Using Industrial Sludge
9. Applications of Ultrathin White Topping

## १०.३ शैक्षणिक वर्ष २०१५-१६ साठी स्वंयसेवकांचा संघ

अ.क्र.	नाव	पद	जबाबदारी
१.	ऋषिकेश भांगडिया	अध्यक्ष	एकंदीरीत नियोजन, समन्वय आणि विद्यार्थी उपक्रम चालवणे
२.	संपदा सोंडकर	उपाध्यक्ष	एकंदीरीत नियोजन, समन्वय आणि विद्यार्थी उपक्रम चालवणे
३.	तुषार काटे	खजिनदार	अर्थविषयक खात्यांचे व्यवस्थापन
४.	शुभम कोठरे	तांत्रिक समन्वयक	तांत्रिक उपक्रमांचे नियोजन आणि अंमलबजावणी
५.	स्नेहा सावंत	सांस्कृतिक समन्वयक	सांस्कृतिक उपक्रमांचे नियोजन
६.	अक्षय गव्हाणे	क्रिडा समन्वयक	क्रिडा उपक्रम नियोजन आणि अंमलबजावणी
७.	गौरव महाजन	साहित्य समन्वयक	साहित्य विषयक उपक्रमांचे नियोजन आणि अंमलबजावणी

## १०.४ विविध स्पर्धामध्ये बक्षीसे मिळवलेले विद्यार्थी चतुर्थ वर्ष स्थापत्य अभियांत्रिकी

अ.क्र.	नाव	उपक्रम
१.	अविनाश प्रजापती	१. द्वितीय पारितोषिक विजेते – आविष्कार २०१५ विद्यापीठस्तरीय संशोधन अधिवेशन २. NCTR - २०१६ मध्ये संशोधन पत्रक प्रकाशित ३. NC-RDD-EMS - २०१६ मध्ये संशोधन पत्रक प्रकाशित ४. द्वितीय पारितोषिक विजेता – इस्टेट वॉर GIT कॉलेज, खेड आयोजित ५. द्वितीय पारितोषिक विजेता – प्रकल्प सादरीकरण GIT कॉलेज, खेड आयोजित ६. विद्यापीठ टेक्निकल फेस्ट 'Cynosure 2016' उपक्रम व्यवस्थापन प्रमुख. ७. मँक्सवेल कंपनीमध्ये कॅम्पस मुलाखतीद्वारे निवड.
२.	तेजस भामरे	१. NCTR – २०१६ मध्ये संशोधन पत्रक प्रकाशित. २. द्वितीय पारितोषिक विजेता – प्रकल्प सादरीकरण GIT कॉलेज, खेड आयोजित
३.	ऋषिकेश भांगडिया	१३ व्या राष्ट्रीय युवक संसद, संसदीय कामकाज मंत्रालय आयोजित स्पर्धेत पारितोषिक विजेता
४.	तुषार काटे	१३ व्या राष्ट्रीय युवक संसद, संसदीय कामकाज मंत्रालय आयोजित स्पर्धेत पारितोषिक विजेता.
५.	सोमनाथ बिराजदार	मँक्सवेल कंपनीमध्ये कॅम्पस मुलाखतीद्वारे निवड
६.	बाळासाहेब मुळे	द्वितीय पारितोषिक विजेता – इस्टेट वॉर GIT कॉलेज खेड आयोजित
७.	मंगेश टेकाडे	NCTR - २०१६ मध्ये संशोधन पत्रक प्रकाशित NC - RDD EMS - २०१६ मध्ये संशोधन पत्रक प्रकाशित

## तृतीय वर्ष स्थापत्य अभियांत्रिकी

अ.क्र.	नाव	उपक्रम
१.	भुरे इंद्रजित	द्वितीय पारितोषिक शहर नियोजन (शोध २०१६ GIT कॉलेज खेड)
२.	स्वामी व्येंकटेश	द्वितीय पारितोषिक शहर नियोजन (शोध २०१६ GIT कॉलेज खेड)
३.	अहिरे एस. के.	द्वितीय पारितोषिक शहर नियोजन (शोध २०१६ GIT कॉलेज खेड)
४.	लोखंडे अमोल	प्रथम पारितोषिक इस्टेट वॉर (Cynosure 2016 DBATU)
५.	लाखे दिनेश	प्रथम पारितोषिक इस्टेट वॉर (Cynosure 2016 DBATU)

६.	पाटील पराग	प्रथम पारितोषिक इस्टेट वॉर (Cynosure 2016 DBATU)
७.	खाचने देवेंद्र	प्रथम पारितोषिक इस्टेट वॉर (Cynosure 2016 DBATU)
८.	श्रेयस सिन्हा	१३ व्या राष्ट्रीय युवक संसद, संसदीय कामकाज मंत्रालय आयोजित स्पर्धेत पारितोषिक विजेता.

### प्रथम वर्ष स्थापत्य अभियांत्रिकी

अ.क्र.	नाव	उपक्रम
१.	उज्ज्वल बागुले	प्रथम पारितोषिक इस्टेट वॉर (Cynosure 2016 DBATU)
२.	अभिजित बेलकजे	प्रथम पारितोषिक इस्टेट वॉर (Cynosure 2016 DBATU)
३.	गणेश बी.	प्रथम पारितोषिक इस्टेट वॉर (Cynosure 2016 DBATU)
४.	विजय माळी	प्रथम पारितोषिक इस्टेट वॉर (Cynosure 2016 DBATU)

## ११. SWOT विश्लेषण

### Major Strengths (सामर्थ्य / शक्ति)

- कुलगुरु, शैक्षणिक समिती, कार्यकारी समितीकडून नेतृत्व आणि मार्गदर्शन.
- अभ्यासक्रमाचा विचार लक्षात घेता त्याची सामान्य गरज आणि रोजगार क्षमता.
- AICTE, UGC, GOM आणि GOI अंतर्राष्ट्रीय तंत्रशिक्षण परिषद, विद्यापीठ मान्यता आयोग, महाराष्ट्र शासन आणि भारत सरकारच्या विविध संसाधने आणि विद्यापीठ अंदाजपत्रकामार्फत विविध मान्यता मिळवणे.
- विद्यार्थ्यांकरिता अद्यावत आणि सुसज्ज प्रयोगशाळा.
- तरुण आणि उत्साहपूर्ण शिक्षक कर्मचारी.

### Major Weaknesses (कमतरता)

- सक्षम शिक्षक कर्मचारी कमतरता ज्यामुळे उपलब्ध शिक्षकांवर अतिरिक्त ताण.
- अपुरे फर्निचर आणि सुविधा
- मूल्यमापन प्रणाली ही परीक्षा केंद्रित असल्यामुळे एकूण खुप साऱ्या परीक्षा आणि त्यासाठीचा कमी वेळ यामुळे शिक्षकांना प्रकल्पा संबंधित उपक्रमांना पुरेसा वेळ मिळत नाही.

### Major Opportunities (संधी)

- विभागाचे बहुसंख्य विद्यार्थी GATE, TOFEL आणि GRE सारख्या विविध स्पर्धात्मक परीक्षेमध्ये सहभाग नोंदवितात.
- देशातील इन्फ्रास्ट्रक्चरचा विकासदर अतिशय वेगाने वाढत आहे त्यामुळे विविध क्षेत्रात स्थापत्य अभियंत्यांची कमतरता जाणवते.

### Major Challenges (आवाहने) :

- नुकत्याच पदवी उत्तीर्ण शिक्षक सदस्यांच्या मदतीने विभागात विविध उपक्रम राबविले जातात.
- औद्योगिक क्षेत्राकरिता गुणवत्तापूर्ण अभियंते तयार करणे.

### विभागाकरिता भविष्य नियोजन

- स्थापत्य अभियांत्रिकीमधील एक नामांकित ज्ञानदानाची जागा बनणे.
- भारतीय उद्योगांच्या गरजेनुसार स्थापत्य अभियंते निर्माण करणे.
- औद्योगिक कार्यक्रम / उपक्रम यांच्या प्रभावी अंमलबजावणीसाठी संस्था-उद्योग साधन करून प्रोत्साहन देणे.
- स्थापत्य अभियांत्रिकीच्या पायाभूत संशोधनच्या गरजेकरिता प्रोत्साहन देणे.

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## संगणक अभियांत्रिकी विभाग



डॉ. अरविंद वा. किवळेकर

सहयोगी प्राध्यापक व विभाग प्रमुख

### विभागप्रमुखांचा संदेश

मला २०१५-२०१६ या वर्षीचा वार्षिक अहवाल सादर करतांना अतिशय आनंद होत आहे. सर्वात अगोदर मी विद्यार्थी, माजी विद्यार्थी आणि माझ्या सहकार्याचे त्यांच्या व्यावसायिक कामगिरी बदल अभिनंदन करतो.

सन २०१५-२०१६ हे वर्ष आमच्यासाठी आमचे सामर्थ्य तपासून बघण्याचे वर्ष होते. आमचे माजी विद्यार्थी अभियांत्रिकी संशोधन, शिक्षण व सामाजिक क्षेत्रात उत्तम कामगिरी करत आहेत. २०१५-२०१६ ह्या वर्षशेवटी आमचे विद्यार्थी मोठ्या प्रमाणात भरती झाले हे खास करून लक्षात घेण्याजोगे आहे कारण गेल्या वर्षभरात बरेच विद्यार्थी भरतीसाठी संघर्ष करीत होते. गेले वर्ष अजून एका गोष्टीची साक्ष देते ती म्हणजे, ‘‘शेवटच्या विद्यार्थ्याची भरती ही आमच्याच माजी विद्यार्थ्यांनी स्थापन केलेल्याकंपनीमध्ये झाली.’’ म्हणून, विद्यार्थी व माजी विद्यार्थी यांच्या संबंधांचे जाळे विकसित होते. सर्वात शेवटी निष्कर्ष काढला तर संगणक अभियांत्रिकी अभ्यासक्रमात नवीन प्रवेश घेतलेल्या विद्यार्थ्यांना त्यांचे स्वप्न साकारण्यास मदत करणे, शिक्षणास पोषक वातावरण निर्मिती करून मदत करणे हे आपले आद्य कर्तव्य आहे यावर मला विशेष भर द्यावा असे वाटते.

— डॉ. अरविंद वा. किवळेकर

### विभागाविषयी

संगणक अभियांत्रिकी विभागाची सन १९९५ साली स्थापना झाली. सुरुवातीला पदवी तंत्रज्ञान ६० विद्यार्थ्यांच्या प्रवेशक्षमतेसह, सन २००१ मध्ये १८ प्रवेशक्षमतेसह पदव्युत्तर अभियांत्रिकी अभ्यासक्रमाची व ६० प्रवेशक्षमतेसह माहिती तंत्रज्ञान अभियांत्रिकी अभ्यासक्रमाची भर पडली. सन २००४ साली माहिती तंत्रज्ञान अभ्यासक्रम स्वतंत्र विभागाखाली सुरु झाला. सन २००८ साली पहिल्या पीएच.डी.च्या विद्यार्थ्यांची ‘संशोधन संगणक अभियांत्रिकी’ अभ्यासक्रमासाठी नाव नोंदणी झाली.

संगणक अभियांत्रिकी अभ्यासक्रमात प्रवेश घेतलेल्या पदवीधराला तीन प्रकारचे ज्ञान व कौशल्ये अवगत करण्यासाठी प्रशिक्षण दिले जाते जेणेकरून, संगणक विज्ञान व अभियांत्रिकी अभ्यासक्रमाचा वापर वेगवेगळ्या क्षेत्रातील दैर्घ्यांदिन जीवनातील समस्या सोडवण्यासाठी करू शकतो.

१) पदवीधराला मूळ विषयाविषयीची मूळ संकल्पनेबद्दल ज्ञान पुरविले जाते.

२) संगणकीय आज्ञावालीशी संबंधित गणितीय संकल्पनांचे प्रशिक्षण दिले जाते.

३) आधुनिक तंत्रज्ञान व साधनांशी संबंधित कौशल्ये संपादन करण्याकरिता पदवीधराला प्रशिक्षण पूर्ण करावे लागते.

### ध्येय

विभागाला शैक्षणिक संस्था म्हणून ओळखले गेले पाहिजे. जेथे शिक्षण केंद्रित दृष्टीकोन ठेवून शिक्षण/ज्ञान पुरविले जाते, त्याचा उद्देश संगणक विज्ञान व अभियांत्रिकीच्या मूळ संकल्पनांचा सखोल ज्ञान संपादन करणे.

### उद्दिष्टे

संगणक अभियांत्रिकी विभागातून शिक्षण घेऊन बाहेर पडणारे विद्यार्थी उच्च गुणवत्तापूर्वक अभियंता, संशोधक व शिक्षणतज्ज्ञ म्हणून ओळखले जातात ज्यामध्ये अभियांत्रिकी समस्यावर त्यांच्या संगणक अभियांत्रिकी विज्ञान संकल्पना, गणितीय ज्ञान व नवीन तंत्रज्ञानाचा वापर करून सर्वमान्य उपाय प्रदान करण्याची क्षमता आहे.

### शैक्षणिक कार्यक्रमाचे उद्दिष्टे

१) संगणकीय आज्ञावालीशी संबंधित गणितीय सिद्धांताचे ज्ञान देणे.

२) विश्लेषण, रचना, अंमलबजावणी आणि माहिती प्रणालीमध्ये जटील समस्या समजून घेण्यासाठीची क्षमता विकसित करणे.

- ३) संगणक अभियांत्रिकी विद्यार्थ्यांमध्ये विज्ञान व अभियांत्रिकी निगडीत समस्यांवर संगणकीय उपाय प्रदान करण्याची क्षमता विकसित करणे.
- ४) माहिती तंत्रज्ञान संपर्क/संचार तंत्रज्ञान क्षेत्रातील जलद बदल स्वीकारून त्याचे कौशल्य प्रदान करणे.

विभागीय कार्यकारी मंडळ सल्लगार मंडळ		
अ.क्र.	नाव	कार्यरत संस्था
१)	डॉ. ऋषिकेश के. जोशी	आयआयटी, मुंबई
२)	डॉ. अमेय करकरे	आयआयटी कानपूर
३)	श्री. श्रीधर भट	Sarvha Systems Pvt. Ltd.
४)	डॉ. संदीप देशमुख	Data Torrent, पुणे
५)	श्री. अशोक चुनदुरवार	रिलायन्स जिओ, मुंबई
६)	श्री. संतोष एम. भिलेगावकर	Bousch + Lomb., पुणे विभाग
अभ्यासमंडळ		
१)	डॉ. अरविंद वा. किवळेकर (अध्यक्ष)	डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठ, लोणेरे
२)	डॉ. जे. ए. आघाव, (तज्ज्ञ)	शासकीय अभियांत्रिकी महाविद्यालय, पुणे
३)	श्री. समीर गानू, (उद्योग तज्ज्ञ)	पर्सिस्टंट सिस्टिम प्रा. लिमिटेड, पुणे
४)	डॉ. लक्ष्मण डी. नेटक (सदस्य)	डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठ, लोणेरे
५)	श्री. योगेश एन. पाटील (सदस्य)	इ.पे.इ., लोणेरे-रायगढ
संशोधन समिती		
१)	डॉ. अरविंद वा. किवळेकर, अध्यक्ष	डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठ, लोणेरे
२)	डॉ. ऋषिकेश के. जोशी, तज्ज्ञ	आय आय टी, मुंबई
३)	डॉ. एन. एल. सारडा, तज्ज्ञ	आय आय टी, मुंबई
४)	डॉ. ए. व्ही. तेंडुलकर, तज्ज्ञ	रिलायन्स इंडस्ट्रीज
५)	डॉ. जे. ए. आघाव, तज्ज्ञ	शासकीय अभियांत्रिकी महाविद्यालय, पुणे
नियमित अध्यापक		
१)	डॉ. अरविंद वा. किवळेकर, पी.एच.डी. सहयोगी प्राध्यापक आणि विभाग प्रमुख	Software Architecture, Artificial Intelligence
२)	डॉ. लक्ष्मण डी. नेटक, पी.एच.डी. सहयोगी प्राध्यापक	Computer Networks, Optical Networks
३)	प्रा. मंजुश्री लह्णा, M.Tech. सहाय्यक प्राध्यापक (वरिष्ठ श्रेणी)	Object-oriented Programming, Software Testing
४)	प्रा. हरिशचंद्र अकर्ते, सहाय्यक प्राध्यापक (वरिष्ठ श्रेणी)	Wireless Sensor Networks, Distributed Systems

५)	प्रा. आय आर ए झेटाम, M.Tech. सहायक प्राध्यापक (वरिष्ठ श्रेणी)	Databases, Software Engineering
६)	संजय यू. वायकर, M.Tech. प्रणाली विश्लेषक	System Administration
<b>कंत्राटी अध्यापक</b>		
१)	श्री. मोहन पाटील, M.Tech. सहायक प्राध्यापक	Data Bases, Computer Networks
२)	श्रीमती. हर्षा गायकवाड, M.Tech. सहायक प्राध्यापक	Software Engineering
३)	श्री. फडतरे पंकज, M.Tech. सहायक प्राध्यापक	Computer Architecture
<b>कर्मचारी वर्ग</b>		
१)	श्री. एस. एम. बोरसे	प्रयोगशाळा सहायक (नियमित)
२)	श्री. एस. एस. मोरे	प्रयोगशाळा सहायक (नियमित)
३)	स्वाती टेंबे	प्रयोगशाळा सहायक (कंत्राटी)
४)	अभिजित टेंबे	प्रयोगशाळा सहायक (कंत्राटी)
५)	एस. एस. मालगुणकर	शिपाई (नियमित)
६)	विवेक उत्तेकर	शिपाई (कंत्राटी)
७)	प्रियांका जंगम	शिपाई (कंत्राटी)

#### ५. शैक्षणिक कार्यक्रमाची माहिती

अ.क्र.	कार्यक्रम नाव	प्रवेश क्षमता
१	संगणक अभियांत्रिकी पदवी (बी.टेक)	६०
२	संगणक पदव्युत्तर अभियांत्रिकी (एम.टेक)	१८
३	संशोधन कार्यक्रम संगणक अभियांत्रिकी	५ (नोंदणीकृत)
<b>विद्यार्थी नोंदणी (संशोधन विद्यार्थी)</b>		
१	हंसराज वानखेडे	पुर्ण वेळ
२	स्वानंद नवंदार	पुर्ण वेळ
३	वृषाली धुमाळ	अर्ध वेळ
४	अमोल भुतडा	अर्ध वेळ
५	संजय ब. ठाकरे	अर्ध वेळ
<b>विद्यार्थी नोंदणी (एम. टेक.) (संगणक अभियांत्रिकी)</b>		
१	पदव्युत्तर अभियांत्रिकी पहिले वर्ष	१४

२	पदव्युत्तर अभियांत्रिकी दुसरे वर्ष	१५
<b>विद्यार्थी नोंदणी (बी. टेक.) (संगणक अभियांत्रिकी)</b>		
१	प्रथम वर्ष अभियांत्रिकी पदवी बी.टेक.	६२
२	दुसरे वर्ष अभियांत्रिकी पदवी बी.टेक.	७७
३	तृतीय वर्ष अभियांत्रिकी पदवी बी.टेक.	७९
४	अंतिम वर्ष अभियांत्रिकी पदवी बी.टेक.	७५

#### Category Wise Student Distribution

	एकूण	खुला प्रवर्ग		इ. मा.व.		अनुसूचित जाती		अनुसूचित जमाती		भटक्या जमाती		विशेष मागास प्रवर्ग	
		स्त्री	पुरुष	स्त्री	पुरुष	स्त्री	पुरुष	स्त्री	पुरुष	स्त्री	पुरुष	स्त्री	पुरुष
प्रथम वर्ष	६२	११	६	१५	९	५	४	१	३	४	३	१	०
द्वितीय वर्ष	७७	१३	१२	१७	११	५	४	१	१	६	६	१	०
तृतीय वर्ष	७९	१७	१४	१८	११	७	४	३	०	३	२	०	०
अंतीम वर्ष	७५	१९	१३	१२	१०	५	५	२	१	६	२	०	०
पदव्युत्तर	१४	१	३	२	१		६				१		

#### अध्यापकांनी मिळवलेले यश (२०१५-२०१६)

- डॉ. अरविंद वा. किवळेकर – यांनी ९ व्या युरोपियन परिसंवादामध्ये (ECSA 2015) त्यांचा शोधनिबंध सादर केला.
- प्रा. लक्ष्मण डी. नेटक, सहाय्यक प्राध्यापक यांनी यशस्वीरित्या पीएच.डी. पूर्ण केली.
- प्रा. हरीशचंद्र अ. अकर्ते - MNNIT, अलाहाबाद, क्यूआयपी अंतर्गत पीएच.डी. अभ्यासक्रमासाठी निवड झाली आहे.
- प्रा. आय. आर. ए. झेटम, सहाय्यक प्राध्यापक, यशस्वी एम. टेक पूर्ण केले आहे.

#### अध्यापक उपस्थित असलेले कार्यशाळा/संमेलन सहभाग

अध्यापकाचे नाव	शीर्षक	कालावधी	स्थान
डॉ. अ. वा. किवळेकर	Outcome Based Education	एक आठवडा 23 <sup>th</sup> June to 28 <sup>th</sup> June 16	डॉ.बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठ, लोणेरे-रायगड
डॉ. लक्ष्मण डी. नेटक			
प्रा. मंजुश्री लळा			
प्रा. हरीशचंद्र अकर्ते	MATLAB in Research and Data Analytics	One week May 2 <sup>nd</sup> -7 <sup>th</sup> , 2016.	श्री. गुरु गोविंदसिंहजी अभियांत्रिकी तंत्रज्ञान संस्था, नांदेड
	Introduction to Design of Algorithm Organized	April 27 <sup>th</sup> to May 30 <sup>th</sup> 2015.	आय आय टी, खरगपूर
श्री. मोहन पाटील	Optimization	02 <sup>nd</sup> to 06 <sup>th</sup> November, 2015	आय आय टी, मुंबई
श्री. फडतरे पंकज			
श्री. हर्षा गायकवाड			

## संशोधन व शोधनिकांड (२०१५-२०१६)

### Research Publications (2015-16)

1. Vinod J. Kadam, M.D. Laddha, "Application of Biometrics for Authentication: Administrative Challenges", International Journal of Advanced Foundation and Research in Science & Engineering (IJAERSE)
2. Volume 1, Special Issue, Vivruti 2015. Impact Factor: 1.036, Science Central Value: 26.54 Vinod J. Kadam, Shraddhanand V. Upadhye, M.D. Laddha, "Implementation of University Sports Time table Scheduling using Genetic Algorithm-A Case Study ", International Journal of Advanced Foundation And Research In Science & Engineering (IJAERSE) Volume 1, Special Issue , Vivruti 2015. Impact Factor: 1.036, Science Central Value: 26.54
3. Arvind W. Kiwelekar, Hansraj Wankhede, "Learning Objectives for Software Architecture", in the 9<sup>th</sup> European conference of Software Architecture (ECSA 2015) held in Dubrovnik Croatia from 7<sup>th</sup> to 11<sup>th</sup> September 2015.
4. Gaurav A. Paliwal, Arvind W. Kiwelekar, published a Book chapter on "A Product Line Architecture for Mobile Patient Monitoring System" titled Mobile Health, 2015 Publisher Springer.
5. Arvind W. Kiwelekar, Hansraj Wankhede, published a paper, "Qualitative Assessment of Software Engineering Examinations with Bloom's Taxonomy" in Indian Journal of Science and Technology Vol 9 Issue 6 Date 3/3/2016.
6. Arvind W. Kiwelekar, Hansraj Wankhede, Sanil Gandhi published a paper, "On Which skills do Indian Universities evaluate Software Engineering Students". In CoRR Repository.
7. Hansraj S. Wankhede has presented his doctoral problem on "Techniques and Methods for E-learning" in the Fourth International Conference on Learning and Teaching in Computing and Engineering Mumbai, India, March 31st - April 3rd, 2016.
8. Swanand Navandar has presented his doctoral problem on "Cognitive Modeling of Software Language Learners" in the Fourth International Conference on Learning and Teaching in Computing and Engineering Mumbai, India, March 31st - April 3rd, 2016

Alumni Corner			
 <p><b>Ashish Tendulkar</b> graduated with B. Tech. from the department in year 1999. After completing B. Tech, he joined for M. Tech. and Ph.D. at IIT Bombay. He has also received post-doctoral fellowship. He served as a faculty member in IIT Madras and TIFR. Now he is working with Google India, Hyderabad.</p>	 <p><b>Pravin Pawar</b>, graduated with B. Tech. from the department in year 2000. After completing his Ph. D., he joined for M. Tech. under Early Faculty Induction Program (EFIP) in IIT Bombay. He earned his Ph. D. from University of Twente Netherlands and Post Doctoral fellowship from the same University. He served as faculty member in NIT, Goa. Currently he is working in Phillips Research India, Bangalore</p>		
 <p><b>Neeraj Parolia</b> graduated with B. Tech. in year 1999. He received his Ph.D. in business administration from the University of Central Florida. His major area is MIS. He additionally holds a M.S. in computer science from Western Michigan University. He has also served as a faculty member in S.J. Mehata School of Management in IIT Bombay. Currently he is working as an Associate Professor in Towson University USA.</p>	 <p><b>Vijay Bhuse</b> graduated with B. Tech. in year 1999. He is a networking and a Cyber security expert. He has supervised and led over 200 students to achieve industry standard certifications (CompTIA Security+, Network+, CCNA). His publications have received more than 350 citations. In 2007 he was awarded a Fellowship at the Institute of Security Technology Studies at the Dartmouth College. In 2011 he received 'Teacher of the year' award at the ECPI University, where he worked before coming to the East Tennessee State University</p>		

	<p>Pinkii Roy is graduated with B. Tech. (2001) and M. Tech. (2003) from the department. She received Ph.D. from IIT Guwahati and presently working as Assistant Professor at National Institute of Technology, Silchar. She received Rashtriya Gaurav award from New Delhi in year 2015.</p>
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## स्पृही परीक्षामध्ये यशस्वी झालेले विद्यार्थी

### स्पृही परीक्षामध्ये यशस्वी झालेले विद्यार्थी

अ.क्र.	नाव	परीक्षा
१)	सुपे पियुष गोपाल	GRE
२)	कवडे अक्षय मुकुंद	GRE
३)	जयेंद्र खंडरे	GRE
४)	गुणरत्न लोणारे	GRE
५)	शशीम वाघमारे	GRE
६)	ऋषिकेश पवार	GRE

७)	वैभव पारवे	GRE
८)	उत्कर्ष पाटील	GRE
९)	उत्कर्ष पाटील	GATE
१०)	स्वाती वाघमारे	GATE
११)	विवेक पाटील	GRE
१२)	प्रसार चौगुले	Ph.D.II.T

## ३० जून २०१६ पर्यंत भरती झालेले विद्यार्थी

1	Abhijeet Katte	PSPL
2	Ruturaj Molawade	PSPL
3	Utkarsh Patil	PSPL
4	Trupti Dhumal	PSPL
5	Rajesh Sawant	PSPL
6	Trupti Dhumal	PSPL
7	Krishna Zore	Drona Aviation
8	Priyanka Ghanshyam	Paladion Networks
9	Chaitanya Jadhav	Paladion Networks
10	Gaurav Farakate	Paladion Networks
11	Manisha Lengde	Paladion Networks
12	Piyush Supe	Paladion Networks
13	Rajhans Jadhao	RedCarpetUp, Gurgaon
14	Gaurav Dhiman	L&T

15	Harshada Garse	L&T
16	Yash Patil	L&T
17	Hemangi Patil	Siemens Software
18	Abhishek Jaryal	CMS
19	Shubham Baraskar	CMS
20	Mukul Dhabale	MediTab
21	Anmol Verma	TCS
22	Pratik Mhatre	SwamiSolutions
23	Chaitali Rupanvar	Techsignia
24	Hanumant Shinde	GS Labs
25	Sumit Tembe	GS Labs
26	Manisha Yadav	PSPL
27	Ichharam Sonawane	PSPL

## पदव्युत्तर अभियांत्रिकी (एम.टेक.) शिष्यवृत्ती धारक विद्यार्थी

१)	विजया पायमल	TEQIP रु. ८,०००/-द.म.
२)	स्वप्नजा भोईर	TEQIP रु. ८,०००/-द.म.
३)	सोनाली कोटकर	TEQIP रु. ८,०००/-द.म.
४)	प्रियांका सत्वे	TEQIP रु. ८,०००/-द.म.
५)	अविनाश निरभवणे	TEQIP रु. ८,०००/-द.म.

६)	सुरेखा गिते	TEQIP रु. ८,०००/-द.म.
७)	आकांक्षा मगरे	TEQIP रु. ८,०००/-द.म.
८)	रणजित पाटील	'पॉस्को' शिष्यवृत्ती रु. ३०,०००/-
९)	आशू मेहता	'पॉस्को' शिष्यवृत्ती रु. ३०,०००/-
१०)	ऋतुराज मोलावडे	'पॉस्को' शिष्यवृत्ती रु. ३०,०००/-

## महाराष्ट्रामधील नावाजलेल्या शैक्षणिक संस्थामध्ये अध्यापक म्हणून कार्यरत असलेले माजी विद्यार्थी

१)	डॉ. सुनिल ब. माने	शासकीय अभियांत्रिकी महाविद्यालय, पुणे
२)	श्री. सिद्धार्थ गायकवाड	शासकीय अभियांत्रिकी महाविद्यालय, पुणे
३)	श्री. डॅनी जॉन परेरा	शासकीय अभियांत्रिकी महाविद्यालय, अवसरी
४)	श्री. हरिष गडदे	शासकीय अभियांत्रिकी महाविद्यालय, जळगाव
५)	श्री. बालाजी शेंद्री	श्री. गुरु गोविंदसिंहजी अभियांत्रिकी आणि तंत्रज्ञान संस्था, नांदेड
६)	श्री. एस. जी. शिकलपुरे	शासकीय अभियांत्रिकी महाविद्यालय, औरंगाबाद
७)	श्री. भूषण येलुरे	शासकीय अभियांत्रिकी महाविद्यालय, कराड

## पायाभूत सुविधामध्ये सुधारणा

- १) नवीन व्याख्यान आणि चर्चासत्र सादरीकरणासाठी रु. ९०,०००/- किंमतीच्या तीन 'एलसीडी प्रोजेक्टर्सची', खोरेदी केली.
- २) नवीन प्रयोगशाळा विद्युतीकरणासाठी अंदाजे रु. १६.०० लाख रुपये खर्च झाला.

## पदव्युत्तर अभियांत्रिकी अभ्यासक्रम एम.टेक. प्रकल्प

विद्यार्थी नाव	प्रकल्प	मार्गदर्शक
वि. एस. गायकवाड	Natural Language Interface to Database NLIDB	श्रीमती एम. डी. लळा
सोनाली डी. कोटकर	An Approach for Cost Effective Privacy Preservation in Cloud	प्रा. वाय. एन. पाटील
रणजित एम. पाटील	The Three Tier Security Scheme in Wireless Sensor with Mobile Sinks	प्रा. हरीशचंद्र अकर्ते
रुपेश आर. पाटील	Secure and Reliable Routing Protocol for Payment Transfer in Heterogeneous Multihop Wireless Network	प्रा. हरीशचंद्र अकर्ते
इ. एस. सोनवणे	Algorithm to find dominance strategy in a two player game	डॉ. अ. वा. किवळेकर
अ.जी. निर्भवणे	Decentralized Access Control and Anonymous Authentication of Data Stored in Cloud	प्रा. वाय. एन. पाटील
एस.एन. भोईर	Traffic Pattern Based Streaming Content Leakage Detection for Secure Packet Transfer	प्रा. हरीशचंद्र अकर्ते
सुरेखा ब. गिते	Automatic Generation of Gap-fill question & Wh-type question	एम. डी. लळा

विनोद कदम	Time Table Scheduling using Genetic Algorithms	डॉ. अ. वा. किवळेकर
श्रीकांत जी. काळे	Effective Pattern Discovery for Text Mining	प्रा. वाय. एन. पाटील
आकांक्षा मगरे	Automated GUI Testing For Android Application	एम. डी. लङ्घा
आशू मेहता	Duplicate Detection in Hierarchical XML Data	प्रा. वाय. एन. पाटील
सीताराम ब. मोरे	Secured data Deduplication	प्रा. वाय. एन. पाटील
विजया एस. पायमल	Distributed, Concurrent and Independent Access to Encrypted Cloud Database	प्रा. वाय. एन. पाटील
प्रियांका पी. सत्त्वे	Independent Access to Encrypted Cloud Database	प्रा. हरिशचंद्र अकर्ते

विद्यार्थ्याचे नाव	प्रकल्पाचे नाव
मनीषा यादव, स्वाती शंकर वाघमारे	Skill Arena (Web Application)
कट्टे अभिजीत गणपत	Talk 2 GUV(Natural Language Querying of Public Data sets)
शर्मा निलेश मनोजकुमार	A Hybrid Cloud Approach for Authorized Secured Reduplication
वर्मा अमोल ब्रह्मानंद, पांडे प्रा.अ., पाटील य.अ.	Hostel Management
जाधव राजहंस बाबूलाल, झोरे कृ. भ., कवडे अ.मु.	App vigil Android Studio
पाटील हेमांगी शिवाजीराव, आंबेकर नि.न., राजपूत मृ.ज.	Traffic Rules Controlling App
ठाकूर अमानसिंग तारासिंग, नंदेश्वर दीपक तीमराज	Learner
परदेशी शुभम प्रभाकर, पाटील अ.श., सावंत रा.गा.	Twitter Sentiment Analysis
धोत्रे अजय चंद्रकांत, धबाले मुकुल, ढवळे चा.व.	Transparency in Budget Maintenance
निपानिकर राकेश, सोलागे पुरुषोत्तम, पावरा सविता	Ensuring Distributed Accountability in Cloud
पलंगतोडे पूजा गोविंदराव, बळाळ अपेक्षा श्रीरंग	Project Scheduling Management Based on PERT and BN
सिंग प्रिया पद्मसिंग, गोसावी स.ध., ढाकणे म.अ.	Book Finder
जाधव चैतन्य विजय, घनवट प्रियांका बजरंग	University Intranet Portal (Web App)
खताते दिपेश दिलीप, म्हात्रे प्रती दत्तात्रय	C&R Android Application
सुपे पियुष गोपाल, मगर रो.र., कोंडेकर व्यं.वि.	Multi Visual Sharing Using SDN Paradigm
गौरव विधान, अभिषेक जरयाल	Bluetooth Messenger Application
पाटील उत्कर्ष माणिक, मोलावडे क्रतुराज तुकाराम	Remote Network Monitoring Client for Android
भोसले प्रियांका महादेव, केकाणे सु.स., दळवी र.अ.	Metamodel Conversion
गांगरेकर हिना अ. सत्तार, गोरीवले अ.अ., साळवी भू.य.	Automated Conversion of 2D image into 3D image
कर्पे संकेत सुधाकर, धुमाळ तृ.उ., कोलगे त.भ.	Roll Shop Resource Planning System
काळे अंकिता अनिल, कोलते स्नेहल अनिल	Autobot/Auto Answering Machine Using Hadoop
राणे सोनल सुंदर, पोतिंडा म.च., सोळळके बा.मो	Super resolution Based Inpainting

भास्कर शुभम अनिल, फराकते गौरव आनंदराव	Alumni Search Engine
भंडकोळी प्रियांका लक्ष्मण, जाधव त.आ., झांबरे ज.रा.	Social Net Site For Social Responsibility
सोनवणे पियुष हंसराज, फिरके रु.प्र., रुपानावर च.बा.	Detection Mitigation Imagination of DDOS Attack
गजमल शीतल दत्तात्रय, हसे स्ने.भा., लेनडे म.रा.	Notification Management System Application Using Android Studio
शिंदे हनुमंत, बंडेवार नागेश	Data Leakage Detection
नागोठकर नमिता उल्हास, पाटील स.कि., सावंत प्रि.उ.	Mobile Calling Using Wi-Fi

### ६ वी यंत्रमानव कार्यशाळा



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### विद्युत अभियांत्रिकी विभाग



डॉ. के. वदिराजाचार्य  
सहयोगी प्राध्यापक व विभाग प्रमुख

#### १. विभाग प्रमुखांचा संदेश

विद्युत अभियांत्रिकी विभागाचा शैक्षणिक वर्ष २०१५-२०१६ साठीचा वार्षिक अहवाल सदर करताना मला अत्यानंद होत आहे. अभ्यासक्रमामधील नवनवीन बदल करून विद्यार्थ्यांना शिक्षणासाठी सर्वांगाने पोषक असे वातावरण उपलब्ध करून देण्याचा प्रयत्न विभागाने केला आहे. त्याचाच परिणाम म्हणून यावर्षात NBA, NAAC ISO सारख्या मानांकन व गुणांकन संस्थांकडून कौतुकाची थाप मिळाली. विभागातील सर्व शिक्षक व शिक्षकेतर कर्मचाऱ्यांच्या वरीने मी सर्व विद्यार्थ्यांचा त्यांच्या योगदानाबद्दल आभारी आहे. यापुढे विद्यापीठाच्या वाटचालीमध्ये विभागाचा सिंहाचा वाट राहील यादृष्टीने अध्ययन व संशोधन करण्याचा विभागाचा मानस आहे.

- डॉ. के. वदिराजाचार्य

## २. विभागाचा आढावा

विभागाची स्थापना १९९३ साली ६० विद्यार्थी क्षमतेच्या पदवी (बी.टेक.) अभ्यासक्रमाने झाली. सर्वोत्कृष्ट शिक्षण देऊन देशातील उद्योगांधंदे व पर्यायाने देशाच्या विकासाला हातभार लावण्याचे उद्देश नजरेसमोर ठेऊन वाटचाल करणे हे विभागाचे ध्येय होय.

विभागामध्ये १८ विद्यार्थी क्षमतेचा पदव्युत्तर पदवी (एम.टेक.) व Ph.D. अभ्यासक्रमाची सोय आहे. तसेच विभागामध्ये Electrical Power Systems, Power Electronics, Energy Systems, Electrical Machines, Control Systems, Electrical Measurement and Instrumentation च्या अद्यावत प्रयोगशाळा आहेत. अभ्यासाव्यतिरिक्त राष्ट्रीय सेवा योजना, राष्ट्रीय छात्र सेना, परिसंवाद व कार्यशाळा यांच्या आयोजन व सहभागासाठी विद्यार्थी व कर्मचाऱ्यांना विभागामार्फत प्रोत्साहन दिले जाते. आमचा विश्वास आहे कि, अभियांत्रिकीचे ज्ञान राष्ट्रीय संपत्तीच्या जतनासाठी व नवनिर्मितीसाठी उपयोगी पडेल. मागील काही वर्षात आमच्या माजी विद्यार्थ्यांनी उद्योगाविश्वामध्ये चांगला ठसा उमटविला आहे. आमच्या विभागामधील सर्व कर्मचाऱ्यांच्या सहकायनि हे सर्व शक्य झाले आहे.

### ३) शैक्षणिक रचना :

#### ३.१ पदवी/पदव्युत्तर/पीएच.डी. अभ्यासक्रम :

- अ) पदवी अभ्यासक्रम : अभ्यासक्रमाचे नाव : बी.टेक.-विद्युत अभियांत्रिकी
- ब) पदव्युत्तर पदवी अभ्यासक्रम : अभ्यासक्रमाचे नाव : एम.टेक. उर्जा प्रणाली
- क) पीएच.डी. अभ्यासक्रम : भाग : उर्जा प्रणाली, शक्ती गुणवत्ता, स्मार्ट ग्रिड शक्ती प्रणाली संरक्षण.

### ४) आकडेवारी :

#### ४.१ विद्यार्थी माहिती :

पातळी	अभ्यास	जागांची संख्या	वर्षे	प्रमाणन	पूर्व प्र. स्थिती	वर्ष
पदवी	बी.टेक	६०	१९९५	अ	अ	२००६
पदव्युत्तर	एम.टेक	१८	२००८	--	--	--
पीएच.डी.	पी.एच.डी.	--	२००८	--	--	--

	पातळी	कार्यक्रम	२०१४-२०१५	२०१३-२०१४	२०१२-२०१३	२०११-२०१२
मुलांची संख्या (एकूण)	पदवी	बी.टेक. विद्युत	२०२	२०८	२१३	२१६
मुलींची संख्या (एकूण)	पदवी	अभियांत्रिकी	८२	७८	८५	७८
एकूण विद्यार्थी संख्या	पदवी		२८४	२८७	२९७	२९४

#### ४.१.१ पीएच.डी. विद्वान :

नाव	नोंदणी क्र.	दिनांक	कामाचा अनुभव
मिथुन जी औष	आरएस२०१२०२०१	२५-९-२०१२	३ वर्ष
मनोज धोंडीराम पाटील	आरएस २०१३०२०१	१२-०८-२०१३	३ वर्ष
विजयकुमार अन्नाजी कुलकर्णी	आरएस २००८०२०१	०१-०१-२००८	
विलास शामराओ बुगडे	आरएस २०१२०२०२	२५-९-२०१२	
कांबळे सचिन गोरख	आरएस. २०१४०२०१		
महाडिक योगेश विलास	आरएस. २०१४०२०२		

#### ४.२ विद्याशाखा माहिती : कायम अध्यापक वर्ग

डॉ. कट्टी प्रदीप कृष्णा

\* अनुभव - (शैक्षणिक / औद्योगिक) - ३० वर्ष

- \* संशोधन मार्गदर्शन : पदव्युत्तर : पूर्ण - १४, सध्या सुरु असलेले - ०४, पीएच.डी. : सध्या सुरु असलेले ०३
- \* प्रकाशन :

	राष्ट्रीय	आंतरराष्ट्रीय
परिषद	६५	७०
जर्नल	०२	२१

- \* व्यावसायिक सदस्यत्व :

- १) आजीव सभासद ISTE
- २) IEI – Institution of Engineers

- \* पुरस्कार :

+ “भारत ज्योति पुरस्कार” तर्फे "Indian International Friendship Society" नवी दिल्ली, आपल्या क्षेत्रात उल्लेखनीय कामगिरीसाठी, अक्टूबर २००३.

- \* तंज आणि संशोधन व्यक्ती म्हणून :

+ विविध परिषद आणि प्रशिक्षण कार्यक्रम येथे मुख्य कल्पना आणि सत्र भाषण.

+ भारत आणि परदेशात आंतरराष्ट्रीय आणि राष्ट्रीय परिषद येथे अध्यक्ष। उर्जा आंतरराष्ट्रीय जर्नल टीका

- + Elsevier :

+ परदेश दौरे – चीन, सिंगापूर, मलेशिया, थाईलैंड.

+ विद्याशाखा, विकास कार्यक्रम, शिक्षक आणि विद्यार्थी प्रशिक्षण कार्यक्रम, परिषद आणि कार्यशाला आयोजन करणे.

## डॉ. वदीराजाचार्य किन्हल

- \* अनुभव (शैक्षणिक / औद्योगिक) :

- १) जी.यु.आय. ट्रेनी BEML, KGF कर्नाटक
- २) व्याख्याता, सीओई प्रवरानगर (१९८६-१९९३)
- ३) सहाय्यक प्राध्यापक, DBATU लोणेरे (१९९३-२००७)
- ४) सहयोगी प्राध्यापक, DBATU लोणेरे (२००७-२०१५)

- \* प्रकल्प / प्रबंध काम :

बी.ई. B.E. Survey on Energy Consumption Pattern in Ind. (औद्योगिक क्षेत्रात उर्जेत नमुना सर्वेक्षण)  
एम.ई. Economic Load Dispatch Using FLN (FLN वापरून आर्थिक भार अधिवहन)

पीएच.डी. Performance Investigation of UPQC (UPQC ची कामगिरी तपास)

- \* संशोधन आणि प्रकाशन :

	राष्ट्रीय	आंतरराष्ट्रीय परिषद
परिषद	२०	३५
जर्नल	--	१७

पदवी – ६० बी. टेक प्रकल्प, आणि १४ एम. टेक व्याख्यान – ०७ पीएच.डी. संशोधन विद्वान मार्गदर्शन. सध्या सुरु असलेल्या – ०५ एम. टेक.

- \* व्यावसायिक सदस्यत्व :

- १) आजीवन सदस्य – ISTE, ISRD
- २) सल्लागार मंडळ सदस्य – बायोइंको प्रकाशन
- ३) सहकारी सदस्य – CET India (Council of Engineers and technologists)
- ४) सदस्य – विभाग सल्लागार मंडळ – मॉर्डन कॉलेज तंत्रज्ञान, पुणे

- \* व्यावसायिक गुणवत्ता सुधारणा :

उपस्थिती – २९

आयोजन – १३

\* व्यावसायिक विस्तार सेवा

एम. टेक. प्रबंध इर्वेल्युएटर	२४ (पुणे २०) (मुंबई ०४)
येथे संसाधन व्यक्ती	१५
सल्लागार म्हणून	०४
सत्र अध्यक्ष म्हणून	०४

- + विद्युत अभियांत्रिकी मुलभूत आणि विशेष प्रयोगशाळा
- + नियोजन आणि अंमलबंजावणी - ०३-१०० केव्हीए विकास सबस्टेशन
- + उच्च आणि कमी तणाव (HT&LT) लाईन बांधणी
- + वस्तीगृहाचे वायरिंग, अधिकारी वसाहत आणि बंगले
- + परिसरात रस्त्यावर प्रकाश प्रबंध अभ्यासक्रम विकास, NSS कार्यक्रम अधिकारी आणि विभागीय प्रशासन.
- \* पुरस्कार :
- सर्वोत्तम विद्यार्थी (गुणवत्ता पुरस्कार), सर्वोत्तम शिक्षक (सीओई प्रवरानगर)

नाव : प्रा. मोहम्मद फारुख सातारकर



- \* अनुभव : (शैक्षणिक / औद्योगिक) १२ वर्ष शिक्षण अनुभव
- \* प्रकाशन :

	राष्ट्रीय	आंतरराष्ट्रीय
परिषद	०२	११
नियतकालिक	--	०६

- \* कार्यशाळा / प्रशिक्षण : १६ कार्यशाळा

डॉ. पाटील उदयकुमार वासुदेव

- \* अनुभव (शैक्षणिक / औद्योगिक) :
  - + कार्यकारी गुणवत्ता अधिकारी - MSD स्विचगेअर लि., जळगांव - ०३ वर्ष
  - + सहाय्यक प्राध्यापक - डॉ. B.A.T.U. लोणे (१६ वर्ष)
- \* प्रकल्प / प्रबंध काम
  - १) बी.ई. सबमर्सिबल पंपसाठी मायक्रोप्रोसेसर आधारित चक्राकार गती मोजण्याचे यंत्र
- \* प्रकाशन :

	राष्ट्रीय	आंतरराष्ट्रीय
परिषद	०६	०८
नियतकालिक	--	०३

- \* संशोधन कार्य :

पदव्युतर - पूर्ण - ०५, सध्या सुरु आहे. - ०४

पीएचडी - सध्या सुरु आहे. - ०३

- \* रिहीवर : आंतरराष्ट्रीय नियतकालिके - टेलर फ्रांसिस परिषद

- \* व्यावसायिक सदस्यत्व :

१) आजीवन सदस्य ISTE, IEEE

**नाव : प्रा. मठवी राजेन्द्र हरिशचंद्र**

\* **अनुभव (शैक्षणिक / औद्योगिक) :**

- + सहाय्यक प्राध्यापक - विद्युत अभियांत्रिकी KGCE कर्जत ०८ वर्ष
- + सहाय्यक प्राध्यापक - विद्युत अभियांत्रिकी, Y.T.I.E.T. कर्जत ०५ वर्ष
- + सहाय्यक प्राध्यापक - विद्युत अभियांत्रिकी, AIKTC पनवेल ०१ वर्ष
- + सहाय्यक प्राध्यापक - विद्युत अभियांत्रिकी, DBATU लोणेरे.
- + GATE साठी विशेष वर्ग आयोजन.



\* **प्रकल्प / प्रबंध काम :** Design of Robust controller for Non-Linear control system using Generalized Describing Function.

\* **कार्यशाळा :** प्रशिक्षण १४

**कंत्राटी कर्मचारी :**

**नाव : श्री. प्रशांत किसनराव जाधव**

\* **अनुभव (शैक्षणिक / औद्योगिक)**

- + पुरवठा शक्ती गुणवत्ता सुधारणा सादर इंटर्नशिप - श्रीराम इलेक्ट्रिक लि. ०६ महिने
- + 'वॉरिएबल फ्रिकेंसी ड्राइव, रेफ्रिजरेशन - व्हीआयटी विद्यापीठ, वेल्लोर.
- + Inplant प्रशिक्षण - २२० केव्ही सब्सटेशन, हरगुल MSETCC
- + Inplant प्रशिक्षण - MSETCC टेस्टिंग डिविजन, कल्याण

\* **प्रकल्प कार्य :**

- १) स्टेन्मेट्रज तत्वे वापरून पुरवठा शक्ती गुणवत्ता सुधारणा आणि नेटवर्क शार्ट सर्किट क्षमता.
- २) इम्प्लेमेंटेशन आफ स्पेस वॉक्टर PWM फार 5 Level डायोड क्लॅम्प इन्वर्टर
- ३) संकरीत पीव्ही प्रणाली उर्जा व्यवस्थापन
- ४) Application of optimization technique for NPPT Using Boost Converter.

\* **पुरस्कार :**

कार्यक्रम व्यवस्थापक - एम. टेक. Power Electronic & drive, वेल्लोर.

#### ४.३ इतर कर्मचारी : अशिक्षकीय कर्मचारी

**श्री. हेमंत वाशीकर**

प्रयोगशाळा सहाय्यक

अनुभव: ११ वर्षे (कंपनीमध्ये)



**श्री. चेतन जुड़कर**

प्रयोगशाळा सहाय्यक

अनुभव : ६ वर्षे



**सौ. प्रमिला पडवल**

प्रयोगशाळा सहाय्यक

अनुभव : ५ वर्षे



**श्री. तुकाराम हंबीर**

प्रयोगशाळा परिचर



**५. विभागातील प्रयोगशाळा व सुविधा:**

विभागातील सर्व विद्यार्थ्यांसाठी अद्यावत प्रयोगशाळा उपलब्ध आहेत. यापैकी काही प्रयोग विद्यार्थ्यांनी त्यांच्या शेवटच्या वर्षाच्या प्रकल्पाचा एक भाग म्हणून बनविल्या आहेत. विभागामध्ये Wi-Fi ची सुविधाहि उपलब्ध आहे.

**५.१ विद्युत अभियांत्रिकी प्रयोगशाळा :** विभागात पदवी कार्यक्रमासाठी विद्युत मशीन, शक्ती प्राणली, स्विचगेअर, पॉवर इलेक्ट्रॉनिक्स, मेजरमेंट आणि इंस्ट्रुमेंटेशन, कंट्रोल प्रणाली आणि माइक्रोप्रोसेसर यांचे सुसज्ज प्रयोगशाळा आहे. या प्रयोगशाळा खालीलप्रमाणे विभागीत केले आहे.

- १) मुलभूत विद्युत अभियांत्रिकी प्रयोगशाळा
- २) शक्ती अभियांत्रिकी प्रयोगशाळा
- ३) पॉवर इलेक्ट्रॉनिक्स प्रयोगशाळा
- ४) माइक्रोप्रोसेसर आणि कंट्रोल प्रयोगशाळा
- ५) मेजरमेंट आणि इंस्ट्रुमेंटेशन प्रयोगशाळा
- ६) विद्युत मशीन्स प्रयोगशाळा
- ७) उच्च वोल्टेज अभियांत्रिकी प्रयोगशाळा

काही प्रोजेक्ट अंतिम वर्ष विद्यार्थ्यांकडून बनवले आणि विकसित केले आहे. काही प्रगत उपकरणे विभागाला बळकट करण्यासाठी, वर्ल्ड बँक प्रोजेक्टकडून खरेदी करण्यात आली आहे. विद्यार्थ्यांचा हितासाठी विभाग परिसरात Wi-Fi ची सुविधा देण्यात आली आहे.

**प्रयोगशाळा – नेटवर्क लॅब**

लॅब इनचार्ज – डॉ. कि. वदिराजाचार्य

प्रयोगशाळा सहाय्यक – श्री. वाशीकर

अ.क्र.	उपकरणे	प्रमाण	खर्च
१)	ब्रिज टाइप पोटेन्शीओमीटर	०२	१०९३८
२)	व्हीटस्टोन ब्रिज गेल्वनोमीटर	०२	१४३२८
३)	गॅल्वनोमीटर विद बॉलस्टिक	०१	५२७७
४)	पावर फॅक्टर मीटर (३ फेस)	०१	१९४९२
५)	मेगर (१००० वोल्ट, १०० मेगाओम)	०१	३६०५
६)	गॅल्वनोमीटर विद बॉलस्टिक	०१	५०१६
७)	MTDC वोल्टमीटर	७०	९२१७५
८)	MTDC अनमीटर	७०	२०९००८
९)	MTDC वोल्टमीटर	७०	६४५०२
१०)	MICA अममीटर	५५	६९८०९
११)	१ फेस वॅटमीटर	२०	३३७९८
१२)	Low PF Meter	१०	३७११०
१३)	1 Phase Wattmeter TPDC Type	२५	४४५४०
१४)	Type Sy 144 M Square Switch Board Flash ०३		४६५७८

**प्रयोगशाला :** Renewable energy lab

प्रयोगशाला प्रमुख : डॉ. पी. के. कट्टी

प्रयोगशाला सहायक : श्री. वाशीकर

अ. क्र.	प्रमाण	खर्च	उपकरणे
1)	PV System	1	185000
2)	Solar Emulator	1	450000
3)	PV Trainer and PV grid tied training System	1	450000
4)	Wind turbine emulator	1	900000

**प्रयोगशाला :** Switchgear and protection lab power system Lab

प्रयोगशाला प्रमुख : प्रो. एम. एफ. फ. आर. सातारकर

प्रयोगशाला सहायक : श्री. सी. ए. जुईकर

अ. क्र.	उपकरणे	प्रमाण	खर्च
1)	Simulation model for Merz-Price, Protection	6	314751
	For alternator Unit, Distance protection model for T.L.		
2)	Current transformer potential transformer	6 9	21410
3)	Simulation models CT Testing Kit PT Testing Kit Switchgear protection relay testing kit	3 1 1 1	163210

**प्रयोगशाला :** Computer Lab

प्रयोगशाला प्रमुख : डॉ. यू. व्ही. पाटील

प्रयोगशाला सहायक : श्री. एच. वाशीकर

अ. क्र.	उपकरणे	प्रमाण	खर्च
1)	HP Computer System	5	40800
2)	HCL info System Ltd	8	17000
3)	DELL Vastro 1400 laptop	4	46280
4)	HCL info System Ltd 43 cm LCD	8	8600
5)	HP DX 780-EXO-29 AV INTEL 2.86GHz 3 MB 2GB 320 GB	15	41396
6)	Lenova MT32 Desktop PC	20	41396

**प्रयोगशाला :** Control System Lab

प्रयोगशाला प्रमुख : डॉ. यू. व्ही. पाटील

प्रयोगशाला सहायक : श्री. सी. ए. जुईकर

अ. क्र.	उपकरणे	प्रमाण	खर्च
1)	PID Controller	1	10750
2)	Compensation Design	2	18300
3)	Compensation Design	2	18300
4)	Linear system simulator	2	16700
5)	Digital Control System	2	29500
6)	DC position control and manual	2	19900
7)	Potentiometric error detector	2	5850
8)	Control system Kit	16	56936
9)	Syncho-Transmitter Receiver pair	2	26860
	Total	203096	

## EESA :

(EESA) ईसा ही एक चैतन्यपूर्ण आणि विद्युत अभियांत्रिकी विद्यार्थ्यांच्या गुणांचे संगोपन आणि वाढीसाठी असलेला मंच आहे. ईसा हा सक्रियपणे तज्ज्ञांचे व्याख्यान आणि व्यक्तिमहत्व सुधारणाचे आयोजन हे प्रसिद्ध संस्थामधील उच्च दर्जाच्या व्यक्तींना बोलावून करते. वेगवेगळ्या स्पर्धात्मक परिक्षांच्या तयारीसाठी विद्यार्थ्यांच्या नियमित परीक्षा घेतल्या जातात. तसेच स्वतःची ग्रंथालये सुद्धा विकसित केली आहे. ज्यामध्ये तांत्रिक संदर्भ पुस्तकांचा उपयोग केला आहे. विद्यार्थ्यांच्या पुस्तकी ज्ञानाचा वापर कार्यक्षेत्रावर कसा यावा म्हणून ही संख्या इंडस्ट्रीयल भेट आयोजित करते.

ईसा ही एक कार्यक्षम संस्था आहे. जी फक्त तांत्रिक क्रियावर भर देता विद्यार्थ्यांच्या अभ्यासाबाहेराल गुणांच्या विकासावर भर देते.

### ५. शैक्षणिक रचना :

विद्युत अभियांत्रिकी विभागाचे सर्व कार्यक्रम ही विभागीय समिती करते हे कार्यक्रम विद्यापीठाच्या नियम आणि नियमावळीनुसार विभागातील पदव्युत्तर आणि पदवीपूर्ण विद्यार्थ्यांच्या प्रतिनिधींकडून आयोजित केले जातात विभागीय न अध्यापन करणाऱ्या कर्मचाऱ्यांच्या मागणीवरून एक प्रतिनिधी निवडून दिला जातो आणि त्याचा समावेश समितीत करण्यात येतो. या समितीच्या गरजेनुसार महिन्यातून एकदा किंवा जास्त वेळा बैठका होतात. संपूर्ण नियोजन करण्याची आणि विभगाच्या कार्यक्षमतेच्या सुधारण्याची जबाबदारी विभागीय समितीची असते.

खालील वेगवेगळ्या समित्या आणि त्यांच्या समित्यांची यादी दिली आहे.

### ६.१ शैक्षणिक देखरेख समिती :

समिती सदस्य प्राध्यापक म.फ.अ.र.सातारकर (अध्यक्ष), श्री. प्रशांत जाधव, वर्ग प्रतिनिधी, सहाय्यक कर्मचारी २.

ही समिती अभ्यासक्रमातील सुधारणा, विद्यार्थ्यांची शैक्षणिक कार्याचे वेळापत्रक, प्रयोगशाळेतील प्रशिक्षण आणि अधिकतम शैक्षणिक प्रशिक्षण, शिकवणे शिकणे यातील नवीन पद्धती, विद्याशाखेतील कर्मचाऱ्यांचे प्रशिक्षण आणि उद्योगांचे नवीनपद्धती इतर संस्थाशी नवीन पद्धती जाणून घेण्यासाठी संवाद औद्योगिक प्रशिक्षण घेते.

तसेच ही समिती माजी विद्यार्थ्यांसाठी संवाद, माजी विद्यार्थ्यांची माहिती, माजी-विद्यार्थ्यांचे थेट नियोजन, विभागाच्या विकासाकडून माजी विद्यार्थ्यांकडून निधी उभारणे, स्थाननियोजन आणि प्राध्यापक यांच्यातील आणि उद्योगक्षेत्रातील संबंध प्रस्थापित करण्यासाठी काम करते.

### ६.२ संशोधन आणि विकास समिती :

समिती सदस्य : प्रा. यू. पी. पाटील, एसआरए/जेआरएफ, एम.टेक-विद्यार्थी;

ही समिती संशोधन आणि विकासक्रिया, प्रकल्प पदव्युत्तर आणि पी.एच.डी. विद्यार्थ्यांच्या प्रकल्पासाठी इतर संस्थाशी संवाद साधते, पदवीपूर्व विद्यार्थी, पदवीपूर्व विद्यार्थी राज्य आणि केंद्रीय शासकीय संस्थांच्या विभागीय विकासासाठी प्रस्ताव तयार करण्याचे कार्य करते.

तसेच ही समिती विषयाची निवड आणि वाटप, सेमीनार रिपोर्ट जमा करणे. सेमिनार आणि प्रकल्प घेणे, गुणांची यादी बनवणे, निकालपत्रक मूल्यमापन करण्याचे काम करते.

### ६.३ व्यवहार समिती :

समिती अध्यक्ष : प्राध्यापक पी. के. कट्टी, श्री. उमेश एम. वरहाते, श्री. ए.च. डब्ल्यू, वाशीकर, श्री. ए.च. एम्बीर.

ही समिती विषयाची निवड आणि वाटप, सेमीनार रिपोर्ट जमा करणे, सेमिनार आणि प्रकल्प घेणे. गुणांची यादी बनवणे, निकालपत्रक मूल्यमापन करण्याचे काम करते. नियमित तक्रारी सोडवणे माहिती दाखल करणे आणि वेळेवर विभागीय प्रशिक्षणाची माहिती दाखल करण्याचे काम करते. तसेच नेहमी लागणाऱ्या उपकरणांची खरेदी करण्याचे काम करते.

### ६.४ औद्योगिक संस्थांशी संवाद साधणारी समिती :

समिती सदस्य : प्रा. के. वटीराजाचार्य, श्री. सी. ऐ. जुईकर

ही समिती औद्योगिक क्षेत्रांशी प्रशिक्षण आणि नोकरी विषयक संवाद करणे. प्रशिक्षणांशी गुणवंत विद्यार्थ्यांची निवड करणे, प्रशिक्षणादरम्यान अनुसरण करणे, औद्योगिक क्षेत्राला भेट देणे. औद्योगिक क्षेत्रातील व्यक्तीशी चर्चा करणे, एखाद्या क्षेत्रातील विद्यार्थ्यांच्या मर्यादा जाणून घेणे, अहवाल दाखल करून घेणे, विद्यार्थ्यांचे सादरीकरण आणि औद्योगिक प्रशिक्षणाची नोंद तसेच व्यक्तीमत्त्व विकास, मुलाखतीसाठी तयारीचे प्रशिक्षण, उच्च दर्जाच्या व्यक्तीचे व्याख्यान आयोजित करण्याचे काम करते.

### ६.५ Extracurricular Activity समिती :

समिती सदस्य : प्रा. आर. एच. मडवी, श्रीमती एस. पी. पडवळ, विद्यार्थी प्रतिनिधी.

ही समिती वेळेनुसार झालेल्या कामाचा अहवाल सादर करणे, वार्षिक अहवाल, प्रगती अहवाल, ई-कन्टेन्ट ऑनलाईन व्याख्यान आयोजित करण्याचे काम करते. ही समिती विद्यार्थ्यांच्या आणि कर्मचाऱ्यांच्या गरजा जाणून घेणे आणि त्या पूर्ण करण्यासाठी मदत करण्याचे काम करते.

#### ५.६ Board of Studies (BOS) :

त्या समितीची महत्वाचे काम अभ्यासक्रम विषय आणि प्रत्येक विषयाच्या अभ्यासक्रमातील प्रकरण वैकल्पिक विषय निवडण्याचे काम करतो. (BOS) चे काही सदस्य औद्योगिक क्षेत्रातील तज्ज्ञ असतात, जे औद्योगिक क्षेत्राच्या दृष्टीने महत्वाचे असलेले विषय आणि संदर्भ पुस्तके, शैक्षणिक नियतकालिके सूचवतात निवडलेल्या अभ्यासक्रम कार्यकारित शैक्षणिक परिषदेकडे मान्यतेसाठी पाठवला जातो.

S. N.	Name	Designation	
1	Dr. P.K. Katti	Head, Dept of Electrical Engineering, Dr. BATU, Lonere	Chairman
2	Dr. N.S. Lingayat	Head, Dept of Electrical Engineering, IoPE, Lonere	Member
3	Shri. S.L. Sonawane	MERC, Mumbai	Expert
4	Dr. K. Vadirajacharya	Dept of Electrical Engineering, Dr. BATU, Lonere	Co-opted Member

#### ७) औद्योगिक भेट २०१५-२०१६

Sr. No.	Industry Details & Address	Date	Class & Students	Coordinators
1	Royal Engineering, Ahmedabad	8-11/03/2015	B.Tech – II 58 Students	Staff – Ms.Monali Bhise Mr. N. K.Patil
2	Ajinkyatara Sahakari Sakhar Karkhana, Satara	20/04/2015	B.Tech – I 58 Students	Staff – Mr. N. Patil Ms.Harshal Gosavi
3	CPRI, Bangalore	12-15/02/2016	All Year 42 Students	Staff- Dr.U.V.Patil

#### Elecrama 2016

विद्युत आभियांत्रिकी शाखेतील विद्यार्थ्यांनी बॅंगलोर येथील ‘बॅंगलोर इंटरनॅशनल इकझीबिशन सेंटर’ मध्ये Elecrama 2016 या कार्यक्रमास भेट दिली. सर्व मिळून ४७ विद्यार्थी आणि एक अध्यापक यांनी १३ फेब्रुवारी, १६ फेब्रुवारी या दरम्यान CPRI बॅंगलोर येथे १५ फेब्रुवारी भेट दिली.



Elecrama हा ५ दिवसाचा कार्यक्रम होता जो १३ फेब्रुवारी ते १७ फेब्रुवारी या दरम्यान बॅंगलोरमध्ये घेण्यात आला. हे फक्त विद्युतविश्वासाचे, उपकरणांचे आणि तंत्रज्ञानाचे भव्य प्रदर्शन नव्हते तर तंत्रज्ञान परिषदेला उद्योग क्षेत्रातील पराकाष्ठा गाठण्यासाठी नेतृत्वाचे व्यासपीठ होते. यामध्ये भविष्यातील तंत्रज्ञानाचे सलक दाखवण्यात आली. या कार्यक्रमाचा मुख्य उद्देश ज्ञानाचे वाटप आणि सेमीनारद्वारा व्यवसायातील प्रगतीच्या संधी, विद्यार्थ्यांशी परिसंवाद करणे हा होता. नवीन उद्याला आलेले तंत्रज्ञान आणि काही औद्योगिक अडचणींवर मिळवलेले उपाय हाच महत्वाचा उद्देश होता. विविध शैक्षणिक संस्थानी उभारलेले नावीन्यपूर्ण उभारलेले प्रकल्पांचे प्रदर्शित हे विद्यार्थ्यांना खूप उपयोगी आणि प्रवृत्त करणारे होते.

प्रकल्पामध्ये solar, vehicle, energy efficient smart fan & wireless transfer of power efficiently यासारख्या कल्पनाचा समावेश होत. CPRI बॅंगलोर ही संस्था राष्ट्री आणि आंतरराष्ट्रीय संघटनेशी संबंधित आहे. Power capacitor Amer testing cables & conductor, energy meter, calibration, high voltage & power system lab. अशा वेगवेगळ्या विभागाच्या भेटी आयोजित केल्या होत्या. Energy meter पासून सुरुवात करून the testing & calibrating of energy meter चे प्रात्यक्षित दाखवण्यात आले. त्रुटी मोजणे आणि यांच्या त्रुटी ओळखणारे उपकरण पाहिले. वेगवेगळ्या वातावरणाच्या परिणामाच्यातील केवलची माहिती आणि प्रणालीतीत त्रुटी, जशा की विद्युत भार वाढणे याची माहिती दिली. voltase lab मध्ये surge arrestor ची चाचणी विद्यार्थ्यांना दाखवली वेगवेगळ्या वातावरणातील परिस्थितीनुसार चाचणीचे setup दाखवण्यात आले वेगवेगळ्या उपकरणातील त्रुटी जाणून घेण्याच्या पद्धती जाणून घेण्यात

आत्मा. औद्योगिक क्षेत्रातील विद्यार्थ्यांसोबतचा संवाद, विद्यार्थ्यांच्या प्रकल्पासाठी कल्पना सुचवणारा होता. CPRI च्या अनेक प्रशिक्षण शिबिराची माहिती करून देण्यात आली.

एकूणच ही भेट विद्यार्थ्यांना संकल्पना समजून घेण्यासाठी आणि त्यांच्या ज्ञानाचा औद्योगिक क्षेत्रातील उपयोगासाठी संबंध प्रस्थापित करण्यासाठी फार उपयोगी ठरली.

#### **NCC आणि NSS मध्ये विभागाचे योगदान २०१५-२०१६ :**

नॅशनल कॅडेट कॉर्पस ही लष्करी प्रशिक्षण विद्यार्थी तुकडी आहे. या विद्यार्थ्यांना मुख्य सैनिकी प्रशिक्षण आणि सैनिकी कवायत दिली जाते. जेव्हा हे विद्यार्थी प्रशिक्षण पूर्ण करतात, तेव्हा त्या विद्यार्थ्यांना इतर विद्यार्थ्यांपेक्षा वेगळे महत्त्व प्राप्त होते. आमच्या विभागाने वेगवेगळ्या प्रसिद्ध शिबिरातून आणि NCC च्या माध्यमातून वैतन्यपूर्ण विद्यार्थी घडविले आहेत. त्या विद्यार्थ्यांची नावे खालीलप्रमाणे आहेत.



#### **'बी' प्रमाणपत्र मिळवलेले विद्यार्थी :**

विद्यार्थी अरीफ सम्यद (T.Y. B.Tech) वर्ग - अ

विद्यार्थी गणेश चौधरी (T.Y. B.Tech) वर्ग - ब

विद्यार्थी स्वप्नील पवार (T.Y. B.Tech) वर्ग - क

वरील विद्यार्थ्यांनी रक्कदान, वृक्ष लागवड, शिवजयंती, ट्रेकिंग कामगार मदत, पोलिओ निर्मूलन मंडळ असे आयोजन केले होते.

#### **डॉ. के. वदीराजाजाचार्य**

##### **१) प्रकाशने :**

- a) International Journal - 6
- b) International Conference - 12

##### **२) राष्ट्रीय समितीतील सेवा :**

- 1) Advisory Board Member – Editorial board of Bioinfo publication.
- 2) Fellow - Council for engineers & Technologist (CET of India)
- 3) Senior Member - ISRD (International), Society For Research and Development
- 4) Member, DAC (Dept Advisory Board) Modern College of Engineering Pune

##### **३) पुस्तक परीक्षण :**

Reviewed a book on "Power Systems Analysis Tillustrated with ETAP (R)" by CRC Publication

#### **प्रशिक्षण कार्यक्रम :**

##### **अ) शिक्षकेतर कर्मचाऱ्यांसाठी:**

01	Life Skills for Happy Life	TEQIP	WCES	23-25 April 2015
02	Field Visit	TEQIP	SRTMN & SGGSN	28-09 to 01-10 2015
03	Safety Measures in Laboratories	TEQIP	DBATUL	25-29 Feb 2016

##### **ब) विद्यार्थ्यांसाठी :**

01	Leadership skills	IIIC & EED	DBATU, Lonere	31 October, 2015
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### ब) शिक्षकांसाठी :

01	Nature Inspired Computations in Engineering	TEQIP	DBATU, Lonere	18-22 May 2015
02	International Workshop on “Smart Technology”	TEQIP	IEEE Chapter Bangalore for faculty of EED	25-26 September, 2015
03	An Overview of Engineering Design Optimization	TEQIP	IIT Bombay	2- 6 November, 2015
04	Outcome based Education2015	TEQIP	DY Patil, CoE, Pune	9-10 January, 2016
05	International Summit on WOSA	TEQIP	NBA, New Delhi	18- 20 March, 2016

### आंतरराष्ट्रीय नियतकालिके :

1. Swaraj S. Kadam, K. Vadirajacharya, “Hybrid Renewable Energy for Rural Electrification by Using 1 Phase Supply” International Journal of Applied Engineering Research(IJAER), Volume 10, Number 44 (2015) pp.31580-31584
2. Swaraj S. Kadam, K. Vadirajacharya, “Hybrid Renewable Energy for Rural Electrification by Using 1 Phase Supply” awaiting to be published in Springer AISC series, June 2015
3. OmprakashMankar, .Dr. K. Vadirajacharya,” Kalman Filter Analysis in Dynamics State of Power System”, International Research Journal of Engineering and Technology (IRJET) Volume 2, Issue 6 September 2015, pp.1170-1173.
4. MithunAush, Manoj D. Patil, K. Vadirajacharya, “Performance Analysis of Multilevel Inverter for Grid Connected System” in International Journal of Applied Engineering Research (IJAER), Print ISSN: 0973-4562, Online ISSN: 1087-1090, April 2015, Special Issues, Volume-10, Number-9, pp.8762-8764.
5. Manoj D. Patil, MithunAush, K. Vadirajacharya, “Grid Tied Solar Inverter at Distribution Level with Power Quality Improvement” in International Journal of Applied Engineering Research (IJAER), Print ISSN: 0973-4562, Online ISSN: 1087-1090, April 2015, Special Issues, Volume-10, Number-9, pp.8741-8745.
6. Chetan W. Jadhao, K. Vadirajacharya, “Optimal Placing of FACTS Devices to Improve Power System Security”, International Journal of Engineering Research and Technology (IJERT), Vol.4, May-2015.
7. DhansriPawar, K. Vadirajacharya, : Design ofShunt active filiter to Improve Power quality Using PQ Theory”, IJERT , Vol-5, Iss-3, March 2016,

### आंतरराष्ट्रीय परिसंचाद :

1. Vivek Ahire, K,Vadirajacharya,” Microgrid Reconfiguration By Optimal DG placement Using PSO”, Proceedings of 26<sup>th</sup> IRF International Conference,7<sup>th</sup> June 2015, Chennai, India pp-12-14,ISBN: 987-93-85465-30-7.
2. Swaraj S. Kadam, K. Vadirajacharya, “Hybrid Renewable Energy for Rural Electrification by Using 1 Phase Supply” proceedings of international Conference on Power, Circuit and Information Technologies (ICPCIT-2015) , May 2015
3. Swaraj Kadam , Dr.K. Vadiraracharya “ Effects of Different Climatic conditions on PV system” proceedings of ICESA -2015, October 2015
4. Swaraj Kadam, Chetan W. Jadhao, K. Vadirajacharya, “Performance Analysis of Power System Security Using Sensitivity Indices Analysis Method” Proceedings of IEEE sponsored International Conference on Computation of Power, Energy, Information and Communication 22-23 April 2015,ISBN.978-1-4673-6524-6
5. Omprakash Mankar, .Dr. K. Vadirajacharya” State Estimation Analysis of a dynamic state using Kalman Filter on Power System” Proceedings of ICESA-2015, 30 October to 01 November 2015, DYPET Pimpri, Pune India.
6. Mithun Aush, Manoj D. Patil, K. Vadirajacharya, “Performance Analysis of Multilevel Inverter for Grid Connected System” Proceedings of International Conference on ‘Engineering Technology and Science’ (ICETS’15) Muthayammal College of Engineering, Rasipuram, Tamilnadu, India 5<sup>th</sup>& 6<sup>th</sup> March 2015, Volume-1, pp.139-141.
7. Manoj D. Patil, MithunAush, K. Vadirajacharya, “Grid Tied Solar Inverter at Distribution Level with Power Quality Improvement” in International Conference on ‘Engineering Technology and Science’ (ICETS’15) organised by Muthayammal College of Engineering, Rasipuram, Tamilnadu, India on 5<sup>th</sup>& 6<sup>th</sup> March 2015, Volume-1, pp.105-109.
8. Chetan W. Jadhao, K. Vadirajacharya, “Performance Analysis of Power System Security Using Sensitivity Indices Analysis Method”, IEEE Sponsored International Conference on Computational of Power, Energy, Information and Communication, April-2015, Melmaruvathur, Tamilnadu, India.

9. Chetan W. Jadhao, K. Vadirajacharya, "Optimal Placing of Static VAR Compensator Using Sensitivity Indices Method for Performance Improvement of Power System", International Conference on Advance Trends in Engineering, Technology and Research, June-2015, Kota, Rajasthan, India.
10. Chetan W. Jadhao, K. Vadirajacharya, "Performance Improvement of Power System Through Static VAR Compensator Using Sensitivity Indices Analysis Method", IEEE International Conference on Energy System And Application, October-2015, Pune, Maharashtra, India.
11. M. S. Bhise, K. Vadirajacharya, "Capacitor voltage balancing of Hybrid Convertert Based on Nearest level control", 2015 International conference on Circuit, power and Computing Technologies( ICCPCT), March19-20, 2015, Noor Islam University, Kumarcoultamilnadu, India
12. M. S. Bhise, K. Vadirajacharya, "Hybrid Modular converter: Application to Medium and high voltage Systems", International Conference on Computation of Power, energy, Information and Communication ( ICCPEIC-2015), April 22-23 2015, Adhiparashakti Engineering college, MelmaruvathureTamilnadu, India..
13. Manoj D. Patil, K. Vadirajacharya, "Grid Tied Solar Using 3-Phase Cascaded H-Bridge Multilevel Inverter at Distribution Level With Power Quality Improvement", Proceedings of VIVURTI 2016, ICETT 2016, DRIEM Nerul Mumbai, March17-18, 2016.

(A) यु. व्ही. पाटील, M. E., Ph. D.

### **परिसंवाद, कार्यशाळा व प्रशिक्षण शिविरे**

#### STTPs / Workshop attended

1. Outcome Based Education, D. Y. Patil Institute of Technology, Pimpri, Pune : 09-10 January, 2016
2. Quality Initiatives in Technical and Higher Educational Institutes, ESCI, Hyderabad : 23-25 February, 2016.

#### Industrial Visits

1. ELECRAMA-2016, Bangalore : 13-14 February 2016
2. Central Power Research Institute (CPRI), Bangalore : 13-14 February, 2016

#### **२. शोधनिबंध :**

1. Rohan Shinde, U. V. Patil, "Virtual DC Bus to Eliminate Common Mode Ground Leakage Current in PV System", IEEE int. conf. on Computation of Power, Energy, Information and Communication 2015, Tamilnadu.
2. Rohan Shinde, U. V. Patil, "Transformer less Six Switch Inverter for Greed Connected System", proceedings of 4<sup>th</sup> international conference on "Advanced Trend in Engineering, and Research (ICATERE – 2015), Balkrishna Institute of Technology, Kota, Rajasthan, 19-20 June 2015.
3. Sheetal C. Rahane, U. V. Patil, "Static Synchronous Series Compensator (SSSC) to Boost Power System Stability", IEEE int. conf. on Computation of Power, Energy, Information and Communication 2015, Tamilnadu.

#### **३. व्याख्याने :**

#### Lectures delivered

1. One week STTP on "Robotics and Applications", June 13 – 19, 2015, Department of Mechanical, PES-COE, Aurangabad  
(Topic: Advanced DC drives for Robotics Applications: one session)

#### Others

1. Member IEEE
2. Reviewed IEEE transaction Papers (Power Electronics, Industrial Electronics)

#### **A. पदवी स्तरावरील प्रकल्प :**

Sr. No	Title of Project	Guide
01.	PV Based efficient and reliable water pumping system	Dr. P.K.Katti
02	Magnetic Levitated Vertical Axis Wind Turbine	
03.	Bagasse based cogeneration in sugar factory	
04.	Nine Switch Converter with independent control of two loads	Dr.K.Vadirajacharya

05.	Android based speed control of induction motor	
06.	Wireless DC motor speed & direction control using ZIGBEE	
07.	Electromagnetic Rail-gun	
08.	RF based multi channel control of electrical appliances	
09.	3 Phase current limiting transformer	M.F.A.R.Satarkar
10.	Universal Supply Unit	
11.	V/F control of induction motor drive	
12.	Single input multiple output DC -DC Converter	Dr. U.V.Patil
13.	Case study o HVDC Padghe Substation	
14.	Microgrid design for Dr.B.A.T.U. Lonere	
15.	Power theft detection in power system	R.H.Madhavi
16.	Sensor controlled street lighting system for power saving	

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## अणुविद्युत व दुरसंचार अभियांत्रिकी विभाग



डॉ. एस. एल. नलबलवार  
सहयोगी प्राध्यापक व विभाग प्रमुख

### विभागप्रमुखांचे मनोगत:

विभागाचा मागील शैक्षणिक वर्षाचा अहवाल मांडताना मला आनंद होत आहे. आमच्या विभागाच्या माध्यमातून सरकारी व खाजगी कंपन्यांच्या तांत्रिक गरजा भागविणे हे आमचे एक उद्दिष्ट्य आहे. त्यासाठी विभागामध्ये प्रार्थकिकांना अधिक महत्व दिले जाते. विभागामध्ये उच्च गुणवत्ता प्राप्त उत्साही व तरुण शिक्षकांचा समावेश आहे. विभागात मांडल्या जाणा-या नवनवीन कल्पनांना व शिक्षण पद्धतींना नेहमीच प्रोत्साहन दिले जाते. विभागामध्ये वेळोवेळी अद्यावत केलेल्या प्रयोगशाळा उपलब्ध आहेत. विभागाला AICTE TEQIP, UGC, GOM, GOI च्या माध्यमातून नियमितपणे आर्थिक अनुदान मिळत असते. विभागातील विद्यार्थ्यांचा गट सातत्याने विविध क्रीडा व सांस्कृतिक कार्यक्रमामध्ये यश मिळवत असतो. तसेच शैक्षणिक सहलींचे आयोजन नियमितपणे केले जाते.

- डॉ. एस. एल. नलबलवार

### २. विभागाचे ध्येय आणि उद्दिष्ट्ये

#### ध्येय :

अध्यापक अध्ययन आणि संशोधनाच्या माध्यमातून सामाजिक सुधारणा करणे हे या विभागाचे ध्येय आहे.

#### लक्ष्य :

अणुविद्युत आणि दुरसंचार या विभागाचे नियमित लक्ष्य हे उच्चतम शिक्षण आणि नविन संशोधन आणि तंत्रज्ञान विकसीत करणे.

### ३) विभागाविषयी :

अणुविद्युत आणि दुरसंचार या विभागाची स्थापना १९९५ मध्ये ६० प्रवेश क्षमता असलेल्या पदवी अभ्यासक्रमाणे झाली. तसेच २००१ मध्ये १८ प्रवेश क्षमता असलेला पदव्युत्तर पदवी अभ्यासक्रम सुरु करण्यात आला. २००८-२००९ मध्ये पदवी अभ्यासक्रमाची क्षमता १२० करण्यात आली. २००३ साली विभागाने पी.एच.डी.

अभ्यासक्रमाची सुरवात केली आणि सध्या २० रिसर्च स्कॉलर सिग्नल प्रोसेसिंग, कॉम्प्युटर नेटवर्क आणि मायक्रोवेव्ह कम्प्युनिकेशन काम करत आहेत. TEQIP च्या माध्यमातून विभाग M. Tech आणि पीएचडी स्कॉलरना फेलोशिप देत आहे.

विभागाचे ध्येय आहे की पदवीधर आणि पदव्युत्तर पदवीच्या विद्यार्थ्यांना अणुविद्युत आणि दुरसंचार विषयामध्ये नैपुण्य मिळावे. विभागाला AICTE, UGC, TEQIP आणि State Government कडून वेळोवेळी विविध संशोधनासाठी निधी उपलब्ध होतो. विभाग अभ्यासेतर गरजा पुर्ण करण्यासाठी अद्यावत प्रयोगशाळा ही प्रकल्प आणि संशोधनासाठी आहे. प्राध्यापकांचे चालु क्षेत्रातील संशोधन चांगले आहे. विभागातून बाहेर पडणाऱ्या पदवीधारांना टेक्नॉलॉजी Embedded System, Signal Processing, Radio Frequency Communication, Mobile Communication आणि Software engineering मध्ये काम करायची चांगली संधी उपलब्ध होते.

विभागातील बरेचसे विद्यार्थी Infosys, TCS, Cognizant, Persistent, Siemens, Huawei, Reliance Communication, Prayas Software, Lithh, JSW, Ispat, Videocon, ONGC, BHEL, BEL, L&T, GE Sasken, MBT, Texas, Accenture, Mahagance, Motorola, Capjmeni, Flextronics, NVDIA, Patny Computers, Reliance Jio, Hexaware, BSE, City bank इत्यादी कंपन्यांमध्ये काम करत आहेत. तसेच बरेच विद्यार्थी उच्च शिक्षणासाठी आयआयटी मध्ये गेलेले आहेत.

विभागातील चांगल्या विद्यार्थ्यांनी GATE, CAT, TOFEL आणि GRE सारख्या स्पर्धा परीक्षा पास होऊन उच्च शिक्षणासाठी गेले. दुसऱ्या व तिसऱ्या वर्षांअखेर औद्योगिक प्रशिक्षण घेणे अति महत्वाचे आहे. औद्योगिक क्षेत्राबद्दल माहिती मिळावी यासाठी विभाग वेळोवेळी औद्योगिक सहल Electronic, Communication & Computing क्षेत्रात काढते. विभागातील विद्यार्थी आंतरराष्ट्रीय आणि राष्ट्रीय परिसंवादामध्ये सहभागी होतात. तसेच विभाग वेळोवेळी कार्यशाळा व राष्ट्रीय व आंतरराष्ट्रीय परिसंवाद भरवतात.

#### ४) प्रोग्राम ऐंज्युकेशनल ऑबजेक्टीव (PEOs) आणि प्रोग्राम आउटकम

##### प्रोग्राम ऐंज्युकेशनल ऑबजेक्टीव (PEO)

- विद्यार्थ्यांना असे तयार करायचे की ते तांत्रिक क्षेत्रामध्ये तसेच उच्चतर पदवी किंवा औद्योगिक क्षेत्रामध्ये,
- संशोधन व विकास क्षेत्रात तसेच जागतिक पातळीवर अणुविद्युत आणि दुरसंचारमध्ये काम करू शकतील.
- विद्यार्थ्यांच्या अभियांत्रिकी क्षेत्रामधील अडचणी कमी करण्यासाठी भक्कम विज्ञान, गणित आणि अभियांत्रिकी या विषयांमध्ये पाया मुलभूत करणे.
- सध्या जीवनातील अडचणी कमी करण्यासाठी आणि समाजाची गरज पुर्ण करण्यासाठी त्या विषयामध्ये विद्यार्थीची तयारी करून घेणे.
- विद्यार्थ्यांमध्ये चांगला दृष्टीकोन, बोलण्याचे नैपुण्य, शिस्त, एकत्रकाम करण्याचे नैपुण्य तयार करणे.
- यशस्वी करीअर घडवण्यासाठी विद्यार्थ्यांना पुरक शैक्षणिक वातावरण देणे.

##### प्रोग्राम आउटकम (PO's) :

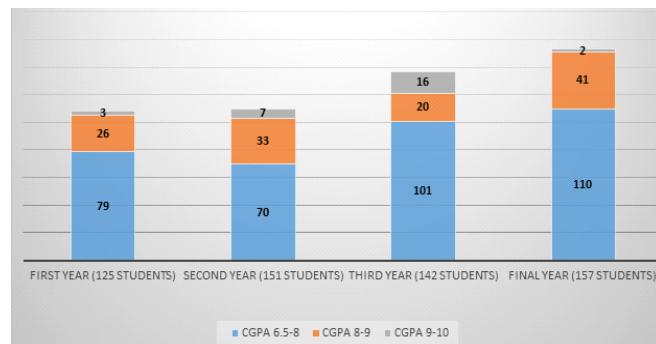
- पदवीधर मिळालेले ज्ञान Differential equation, Vector calculus, complex variable, matrix theory, probability theory, physics, chemistry and electrical & electronic engineering पुढे चालवत राहतील.
- पदवीधर अणुविद्युत आणि दुरसंचार मधील अडचणी शोधून त्या दूर करतील.
- पदवीधराकडे इलेक्ट्रॉनिक सकर्टीट आणि सिस्टीम ॲनालिसिसचे नैपुण्य असेल.
- पदवीधराकडे Design digital & analog system & component चे नैपुण्य असेल.
- Electronics Signal processing and communication मध्ये मिळालेली माहिती पुढे पदवीधर वापरतील.
- पदवीधर इलेक्ट्रॉनिक अॅन्ड टेलीकम्प्युनिकेशन तसेच, पर्यावरण आणि सामाजिक अडचणी लक्षात घेऊ शकेन.
- पदवीधराकडे अभियांत्रिकी संकल्प इतर लोकांसोबत बोलण्याचे लिहिण्याचे आणि ऐकण्याचे नैपुण्य असेल.
- पदवीधर हा काम आणि गट समन्वय यामध्ये टीममध्ये नैपुण्य असेल.
- पदवीधर हा इथिकल रीसोर्सीबीलीटी आणि प्रोफेशनल अविअरनेस समजवू शकेल.
- आजिवन शिक्षण आणि आत्मविश्वास वाढेल.
- पदवीधरामध्ये आत्मविश्वास आणि आजिक्य शिक्षण निर्माण करेल.

## ५.१ पदवी विद्यार्थ्यांची आकडेवारी

Academic Programme												Duration			Intake						
Bachelor of Technology (B.Tech)			Electronics and Telecommunication Engineering												Four Years			120			
Master of Technology (M.Tech)			Electronics and Telecommunication Engineering												Two Years			18			
Ph.D			Electronics and Telecommunication Engineering												20 Research Scholars are registered						

अक्र	वर्ष	खुला			अजा			अज			इमाव			भजाविजा			विमाव			एकूण		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
१.	प्रथम	२९	१	४३	१	४	११	३	३	६	२	१	४	१	३	६	३	०	३	११	३७	१२
२.	द्वितीय	२९	२	५३	१	८	२१	१	३	४	२	२	५	८	५	३	३	४	८८	६०	१४	
३.	तृतीय	३२	२	५३	१	७	११	१	२	१	२	४	६	४	७	१	१	२	३	८३	६०	१४
४.	चतुर्थ	३१	२	५६	१	०	८	१८	३	२	५	२	१	३	६	२	४	०	४	८५	५५	१४
																						०

## ५.२ निकालाचे पृथःकरण :



Number of passing undergraduates in each year of the course are as shown in the chart for current academic year.

## 5.3 Campus Placements

Placement Statistics		
2011-2012	Cognizant	48
	Persistent	2
	JSW Ispat	1
2012-2013	Prayas Software Solutions	22
2013-2014	Cognizant	13
	PALADIAN	1
	IBM	1
	TCS	1
2014-2015	Infosys	9

**अध्यापक वर्ग :**

	<p><b>डॉ. एम. एल. नलबलवार</b>  <b>बी.ई. (CSE), एस.जी.जी.एस.,</b>  <b>नांदेड.</b>  <b>एम.ई. (ES), एस.जी.जी.एस. नांदेड.</b>  <b>पी.एच.डी (Comm. Engg.) IIT</b>  <b>दिल्ली २५ वर्षे अनुभव.</b></p>		<p><b>डॉ. ए. बी. नांदगावकर</b>  <b>बी.ई. (E&amp;TC) शासकीय</b>  <b>अभियांत्रिकी कॉलेज, औरंगाबाद.</b>  <b>एम.ई. (EE) शासकीय अभियांत्रिकी</b>  <b>कॉलेज, औरंगाबाद.</b>  <b>पी.एचडी (E&amp;TC), DBATU</b>  <b>लोणेरे.</b></p>
	<p><b>डॉ. एस. बी. देवसरकर</b>  <b>बी.ई. श्री. संत गजानन महाराज</b>  <b>कॉलेज ऑफ इंजिनिअरिंग, शेगाव</b>  <b>एम.ई. एस. जी. जी. एस. कॉलेज</b>  <b>ऑफ इंजिनिअरिंग टेक्नॉलॉजी, नांदेड</b>  <b>पी.एच.डी. SRTMU नांदेड</b>  <b>२६ वर्षे अनुभव.</b></p>		<p><b>प्रो. एन. एस. जाधव</b>  <b>बी.टेक, डॉ. बा.आ.टे.यु. लोणेरे.</b>  <b>एम.टेक, डॉ. बा.आ.टे.यु. लोणेरे.</b>  <b>पी.एच.डी. चालू आहे.</b></p>
	<p><b>प्रो. एस. वी. खोब्रागडे</b>  <b>बी.ई. (EE) नागपूर युनिव्हरसिटी,</b>  <b>नागपूर</b>  <b>एम.ई. (EE) मुंबई युनिव्हरसिटी, मुंबई</b>  <b>पी.एच.डी. चालू आहे.</b>  <b>१७ वर्षे अनुभव.</b></p>		<p><b>डॉ. बी. आर. अच्युत</b>  <b>बी.ई. डॉ. Dr. B.A.M.U. औरंगाबाद</b>  <b>एम. टेक. D.B.A.T.U. लोणेरे</b>  <b>पी.एचडी. आयआयटी शेरकी १०</b>  <b>वर्ष अनुभव</b></p>

**अधिव्याख्याता :**

	<p><b>आर. डी. शेठ</b>  <b>सहायक प्राध्यापक</b>  <b>बी.टेक. Dr. B.A.T.U. लोणेरे</b>  <b>एम. टेक. Dr. B.A.T.U. लोणेरे</b>  <b>अनुभव ३ वर्षे</b></p>		<p><b>ए.ए. जंगम</b>  <b>बी.टेक. Dr. B.A.T.U. लोणेरे</b>  <b>एम. टेक. Dr. B.A.T.U. लोणेरे</b>  <b>अनुभव १ वर्षे</b></p>
	<p><b>एम. वी. बुकत्रे</b>  <b>सहायक प्राध्यापक</b>  <b>बी.टेक. S.G.G.S. नांदेड</b>  <b>एम. टेक. D.B.A.T.U. लोणेरे</b>  <b>अनुभव ३ वर्षे</b></p>		<p><b>एस. वी. देसाई</b>  <b>सहायक प्राध्यापक</b>  <b>बी. टेक Dr. B.A.T.U. लोणेरे</b>  <b>एम. टेक. VJIT मुंबई</b></p>
	<p><b>के. एस. कांबळे</b>  <b>सहायक प्राध्यापक</b>  <b>बी. टेक. S.G.G.S. नांदेड</b>  <b>एम. टेक. D. B.A.T.U. लोणेरे</b>  <b>अनुभव १ वर्षे</b></p>		<p><b>रमेश वी बंडगर</b>  <b>सहायक प्राध्यापक</b>  <b>बी. टेक.</b>  <b>एम. टेक. D.B.A.T.U. लोणेरे</b></p>

	<p><b>एस. एस. शिंदे</b>          सहायक प्राध्यापक          बी.टेक. Dr. B.A.T.U. लोणेरे          एम. टेक. Dr. B.A.T.U. लोणेरे          अनुभव १ वर्ष</p>
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### Supporting Staff

	<p><b>आर. एम. चव्हाण</b>          प्रयोगशाळा सहायक – CEA (BTE MUMBAI), BA (MUMBAI UNI)          भौतिक शास्त्र</p>		<p><b>एस. टी. जाधव</b>          प्रयोगशाळा सहायक          बी.एस.सी.,          भौतिक शास्त्र</p>
	<p><b>एस. एस. पाटील</b>          प्रयोगशाळा सहायक          बी.एस.सी.          भौतिकशास्त्र</p>		

### ६. अध्यापकांवरील अधिक जबाबदारी :

#### डॉ. एस. एन. नलबलवार :

1. Member of Executive and Academic Council
2. Coordinator for AICTE activities
3. TEQIP-MIS Coordinator
4. In-charge of University Computer Center
5. AQAR Coordinator
6. RUSA Coordinator
7. NIRF Coordinator
8. AISHE Coordinator
9. NBA Coordinator
10. Intercom Service Coordinator
11. Member of University Library Committee
12. Member of University Finance Committee
13. Member of Industry, Institute and Interaction
14. System Administrator for QEEE Programme Cell of TEQIP
15. Chairman, CCTV Procurement for Raigad District
16. Member, BOS, University of Pune
17. Research and Recognition Committee Member, VJTI, Mumbai
18. Coordinator, Digital India Programme
19. Member of Central Purchase Committee
20. Coordinator for Examinations Rules and Regulations for Ph. D. Programme

#### प्रो. एस. वी. खोब्रागडे :

1. Women Grievance Cell
2. Coordinator for UGC remedial Coaching classes
3. Coordinator for TEQIP Equity Cell
4. Coordinator for Avishkar-2015

### डॉ. ए. बी. नांदगावकर

1. Head of TEQIP procurement, SPFU, Maharashtra
2. Rector, Alknanda Hostel
3. Member of BOS, VIIT, Pune

### डॉ. बी. आर. अच्यर

- 1) Faculty advisor TEESA
- 2) Coordinator university statutes and ordinance
- 3) Rector, Hostel, Gagangiri
- 4) Coordinator, TEQIP - II R & D Cell
- 5) Member, Disaster Management cell
- 6) Member, University Technical event committee
- 7) Coordinator, Digital India Programme

### सल्लागार समिती :

अणुविद्युत आणि दूरसंचार या विभागाने वेळोवेळी होणाऱ्या विकसित कामांवर लक्ष ठेवण्यासाठी समितीची स्थापना केली. खालील सदस्य औद्योगिक आणि शैक्षणिक क्षेत्रातील आहेत. ही समिती शैक्षणिक ऑडिट तसेच डायनामिक करीक्युलम आणि संशोधन कार्यामध्ये मदत करण्यासाठी तयार आहेत.

S. N.	Name	Designation
1	Lt. Cdr (Retd) Ravindra Kale	Sr. Program Manager, Tata Communication Ltd., Mumbai.
2	Dr. Munir Sayyad	General Manager and Head of Reliance JIO Quality Assurance Lab, Mumbai
3	Suresh Lok	Senior Vice-President Consulting Innovation and Evaluation for New Age Services at International Innovation, Incubation and Training Center, Navi Mumbai
4	Santosh B. Gadewar	DGM-SAP, IT Business Solutions, Larsen & Toubro Limited, EAIC, Powai, Mumbai-400072
5	Dr. V.M. Gadre	Professor, Electrical Engineering, IIT Bombay
6	Dr. R.R. Manthalkar	Professor, Department of E & TC, SGGSIE & T Nanded, MS
7	Dr. S.G. Bhirud	Professor, E & TC VJTI, Mumbai

### Board of Studies

S. N.	Name	
1	Dr. S. L. Nalbalwar, Head, Department of Electronics and Telecommunication Engineering, Dr. Babasaheb Ambedkar Technological University, Lonere- Raigad	Chairman
2	Dr. S. B. Desoarkar, Department of Electronics and Telecommunication Engineering, Dr. Babasaheb Ambedkar Technological University, Lonere- Raigad	Member
3	Dr. D. S. Karanjkar, Institute of Petrochemical Engineering, Lonere	Member
4	Dr. Munir Bashir Sayyad, Head Reliance Jio Innovation & Test Labs ( General Manager)	Expert
5	Prof. S. V. Khobragade, Department of Electronics and Telecommunication Engineering, Dr. Babasaheb Ambedkar Technological University, Lonere- Raigad	Co-opted Member
6	Dr. A. B. Nandgaonkar, Department of Electronics and Telecommunication Engineering, Dr. Babasaheb Ambedkar Technological University, Lonere- Raigad	Co-opted Member

### ४. संशोधन व प्रकाशने

#### संशोधन प्रकल्प

RPS project improving the perception of Sensori neural hearing impaired by developing optimized signal processing algorithm for hearing aids. 20/AICTE/RIFD/RPS (Policy-2)-69/2012-13 Dated 4/2/2013

Sponsoring Agency AICTE Delhi

Sanctioned Amount 7,55,000

Principal Investigator Dr. S. L. Nalbalwar

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## ११. प्रयोगशाला

### ११.२ उपकरणे

Department has state of the art research equipment and software(s) in the area of Signal & Image Processing, Embedded Systems, Biomedical Electronics and Antenna &Microwave Engineering. These equipment include DSP starter kits, development boards, daughter cards to capture / process the images & video signals in real time mode, Spectrum analyzer, DSOs, RF signal Generator, Dual Channel arbitrary wave form function Generator, Microwave Communication Trainer, Synthesized Receiver, Fiber optics setup and various biomedical instruments, etc. The software related to above research areas include Cadence, IE3D, EMI Test, EM CAD, MATLAB, Proteus VSM, Quantic SI and Micro-wind.

S.N.	Name of Instrument	Qty.	Total Cost
1	Cadence EDA Tools	01	15,82,500
2	Compact Optical test Platform with SM 1310/1550 nm, JDSU MTS- 6000	01	3,99,000
3	LAN Trainer with LAN Simulation Software Hardware Scientech -5002A	01	2,47,500
4	MCS -03 microwave communication training system	01	2,08,620
5	UHF Antenna trainer & modeling system, 50-860MHz	01	1,99,175
6	HP Compaq Tablet PC ,TC 1100,1.1GHz/512/60GB/26.4Cm,TFT/ CDR/RWW	01	1,20,034
7	Software :- IE3D for windows NT/95 power pack (MM 060)	01	3,60,000
8	Software :- FIDELITY for windows 95 TN (fD060)	01	3,30,000
9	Softwares :- MD SPICE for windows NT (SP 060)	01	1,65,000
10	EMI-Test Software	01	6,58,000
11	EM CAD Software	01	1,24,000
12	Proteus VSM software	01	4,51,000
13	Quantic SI (1 user license)	01	7,49,000
14	MICROWIND Package Includes DS CH3 (10 User)	01	5,50,000
15	Proteus PCB software (01 user)	01	1,56,000
16	R & S Make RF Signal Generator , 3 GHz. Model No:- SM – 300	01	4,21,500
17	R & S Make Dual Channel Arbitrary wave form function Generator, AM – 300	01	4,28,125
18	Synthesized Receiver with RF Source	01	1,44,000
19	DSP development board with provision for daughter cards, DSP kits, various daughter cards, related software	01	10,00,000
20	AMITECH make 2.4 GHz Satellite Communication Lab with Spectrum Analyzer, Model: STC 24	01	2, 07,000
21	AMITECH make, Microwave Antenna Training system	01	2, 07,000
22	YOKOGOVA digital scope, 500 MHz band width, 4 Channel, 5G Samples/sec	01	6, 86, 662
23	FPGA Lab Trainer, Custom Board Implementation of FPGA Design, Universal Development platform for FPGA	01	1396500
24	HFSS software	01	577500
25	Embedded System	01	9,40,495
26	Simtel CD and Pen drive 5 user License	21	5,00,000

## ११.२ प्रयोगशाळेसाठीचा खर्च

S. N.	Name of the Laboratories	Total cost
1	Biomedical Engineering	3257585
2	Microprocessor & Microcontroller	663320
3	Fiber Optic Communication	3654254
4	Digital Communication	1531923
5	Digital Signal Processing	4045846
6	Digital Electronics	407913
7	Electronic Devices and Circuits	1847513
8	Principle of Communication Engineering	2255922
9	Electronic Measurements and Instrumentation	197294
10	Computer Networks	4579669
11	Microwave Theory and Technique	2830368
12	Advanced Antenna Theory	9291535
13	Digital System Design & VLSI	6001483
14	Embedded System	812050
15	Other Laboratory Materials	2346526
Total Cost		43723201

## १२. प्रकल्प

### १२.१ मुख्य प्रकल्प

1	RFID based bus announcement system
2	Character recognition from image
3	Arduino based green house parameter controlling and monitoring system
4	Automated irrigation system
5	Microstrip patch antenna for WiMax application
6	Wireless drip irrigation system with logging for green development condition
7	New T-slot rectangular microstrip patch antenna
8	Human voice controlled home appliances
9	Home automation under Wi-Fi through android apps from any smart phone
10	Navigation of powerpoint using hand gestures
11	Locker opening and closing system using RFID, GSM and password
12	Design, simulation and construction of stepped impedance microwave low pass filter
13	Electronichand gloves to display sign language
14	Video steganography
15	Vehicle tracking and accident detection system
16	Automated control system in vehicle for air pollution detection

17	Single image super resolution
18	Intelligent traffic control using IR sensor and microcontroller
19	Industrial water pollution detection
20	New I slot rectangular microstrip patch antenna
21	Microcontroller based Hazardous gas detection and alerting system using GSM module
22	DMA controller using VHDL
23	Sun tracking solar panel
24	Microwave bandpass filter with compact structure
25	Digital Watermarking
26	RFID and GSM based electronic voting machine
27	Temperature notifier
28	Block matching algorithm for motion estimation video compression
29	Design and study of S shaped Microstrip antenna for WiMAX application
30	Wireless unmanned ground vehicle
31	Electricity billing meter using GSM modem
32	Prototype of driverless vehicle for smart city
33	Microstripbandpass filter Design

34	QRS complex detection using wavelet transform with myocardial infarction detection
35	Circular monopole microstrip antenna
36	Circular monopole microstrip antenna
37	Automation with visitor counter
38	Motion detection and surveillance using MATLAB
39	Hydraulic robot arm controlled by human arm
40	Designing of microstrip patch antenna at 2.4 GHz (E-shape)
41	4-element Microstrip patch antenna array
42	GSM based notice board
43	Hand motion control robot
44	Traffic light controller using ATmega328
45	Landslide monitoring system using multisensor
46	Automated Toll collection system using RFID and GSM
47	Communication through human body using Red Tacton
63	Automatic Rationing distribution system using Embedded system technology
64	Digital audio Watermarking using FFT
65	S shape microstrip patch antenna
66	Accident prevention using alcohol detection
67	A single band microstrip antenna for WiMax application
68	Robotic arm
69	Three way controlled robotic arm
70	Colour detection of object pointed by eye
71	Motion detector using NE555 timer

48	Double U slot rectangular microstrip patch antenna
49	Single U slot microstrip patch antenna
50	DTMF based cell phone operated robot
51	Password based electronic circuit breaker
52	Ultrasonic blind stick
53	Head movement based assist system for physically challenged
54	Wireless power theft monitoring system
55	Sleep sensing and alerting system
56	Token number display and security
57	RFID based smart trolley used in megamart automation
58	Heart rate measurement using microcontroller
59	Performance analysis of ATR and DTR receiver using MATLAB simulation
60	Digital Speedometer with password and speed limit controlling
61	Power harvesting device using piezo electric effect
62	GSM based train security
72	GSM based home security
73	Object (visitor) counter with automatic room light control
74	Coin based mobile charger
75	Bowtie antenna for satellite communication
76	Layer 3 VPN with OSPF protocol between CE PE
77	Design of microstrip patch antenna for wireless application
78	Arduino based environment monitoring system
79	Wireless luggage security alarm

## ११.२ पदवी स्तरावरील समाजोपयोगी प्रकल्प

S. N.	Community Project Name
1	A microcontroller based Stout Robot with automatic crack detection in railway tracks using LED-LDR assembly
2	About development of computer application for school management system
3	Assistive device for Speech Impaired
4	Automatic Plant Irrigation
5	Automatic Toll Control System
6	Bike rider's safety using helmet
7	Blind Navigation System
8	Blood Bank Management System

9	Classroom Automation
10	Database management system of J.B.Sawant
11	Digital visitor counter
12	Energy meter billing with load control over GSM with user programmable number features
13	Home Security with multiple sensors and mobile messaging facility
14	Library Management System
15	Marine boundary identification system
16	Medical store management system
17	One touch alarm system for womens safety using GSM
18	Online portal for teacher and student interaction

19	Polyhouse	23	Smart Farming
20	Portable Solar Powered Sprayer	24	ST Indicator
21	Scrolling Display Using FPGA	25	Wireless Patent Monitoring System using ZigBee
22	Seed Marketing Management System		

### ११.३ पदव्युत्तर पदवी स्तरावरील प्रकल्प

Signal Denoising using Selective IMF approach and Hurst Exponent estimation

This project focuses on the denoising of signal by EMD. The idea is proposed of selecting the appropriate and then estimating Hurst component using DFA.

A Triple Band UWB Monopole Antenna for Spacecraft, WLAN and Satellite Communication

A triple band antenna resonant at three frequencies 2.8 GHz, 5.8 GHz ,10.1 GHz for Spacecraft, WLAN and Satellite communication applications. The frequency band over which the antenna radiates is between 2.8 and 10.8GHz with a VSWR<2 shows the UWB application. The antenna is highly efficient with an efficiency of more than 80% over the desired resonating bands. Moreover it has omnidirectional radiation pattern with a good directivity. The gain of more than 4 dBi is obtained over the desired resonating bands.

Multiband Inset-Fed Rectangular Corner-chopped Fractal Antenna

The upcoming wireless communication system has a sparked attention on multiband antenna technology. There has been a rapid development in compact designing of a multiband wireless communication technology. So this antenna can be used in a single device for multiband applications.

A New Secure Image Transmission via Secret-fragment visible mosaic image

In this project both secret and target images are divided into blocks and sorted according to avg std dev then color transformation is done on secret image known as image mosaicing so secret image looks like target image. To extract secret image from mosaic image reversible color transformation is done. Experimental results show that mosaicing gives accurate results.

Automatic face tracking system for real time application using Raspberry pi

In this digital world, we are rapidly move toward online education area, where all the lecture of respective subject are available on internet. While recording a NPTEL lecture cameramen need to adjust camera according with the mentor move one position to other and because of these video quality degraded. Automatic face Tracking is best attempt for NPTEL lecture video recording using Raspberry PI. Since we can track the face of mentor by PAN,TILT and ZOOM camera with high accuracy. The proposed system is used the HAAR Cascade Classifier to detect the face in real time application.

A Dual Band MIMO Antenna with High Isolation for WLAN Applications

In field of the wireless communication systems and increasing their applications, dual band antenna with different shapes and design is in great demand and finds many uses in personal communication systems, small satellite communication terminals and other applications involving wireless communications. A dual band (2-2.6GHz) and (5.15-6GHz) MIMO antenna is designed for WLAN applications with high isolation which is below -20dB at all frequencies.

A new secure image transmission via secret fragment visible mosaic image

In this project both secret and target images are divided into blocks and sorted according to avg std dev then color transformation is done on secret image known as image mosaicing so secret image looks similar to target image. This created image is called as mosaic image. This mosaic image is transmitted through internet. Then at receiver side to extract secret image reversible color transformation is done. Experimental result shows that mosaicing gives accurate result.

Power Transformer Monitoring and Controlled Based on Parameters Analysis

In present, power transformers need development of the data-acquisition system that can be used for condition monitoring, which results in faults detection as well as preventive factors. The main objective of the presented system is to monitor parameters of transformer remotely through Global System for Mobile (GSM), which will avoid need for any manual operating thus reducing human efforts. We proposed the embedded system design, to monitor parameters such as voltages, currents, temperatures and coolant level. This System is remotely located at the transformer site in a control cabinet which collects and analyzes all data for every defined interval.

LabVIEW Based Data Acquisition And Tool Condition Monitoring & Control Based on Parameter Analysis

Tool Condition Monitoring is very fundamental area of any manufacturing Industry as tool wear can affect machine life, quality of work-piece and hence quality of final product which can affect productivity or rate of production of the industries. Therefore project deals with tool condition monitoring and control of

CNC lathe machine integrated with data acquisition of all parameter that sensed by different sensors. Project aimed to develop a LabVIEW Interaction module which can sense different parameter for the further processing.

## १२. पीएच.डी. अभ्यासक्रम

### १३.१ पीएच.डी. अभ्यासक्रमासाठीचे विद्यार्थी

Sr. No.	Name of the Candidate	Registration Number & Date	Broad area of research	Research Guide
1	Rohit Gawade	RS 20120302 24/09/2012	Development of Energy Efficient Techniques for Wireless Network	Dr. S.L. Nalbalwar
2	Pavan Paikrao	RS 20120303 24/09/2012	Developing Optimized Signal Processing Techniques for Improving the perception of Hearing Impaired	Dr. S.L. Nalbalwar
3	Pallavi Ingale	RS 20130301 13/08/2013	An Information Extraction Approach to Acoustic Signal Processing: Analysis, Segregation and Detection	Dr. S.L. Nalbalwar
4	Yuvraj Parkale	RS 20130302 13/08/2013	Development of Compressed Sensing Techniques for 1-D and 2-D Signals	Dr. S.L. Nalbalwar
5	V.V. Ingale	RS 2009 0302 09/02/2010	Some Studies on HRV Signal Processing	Dr. S.L. Nalbalwar
6	M.P. Bhagat	RS 20090303 10/02/2010	Wireless Power Transmission	Dr. S.L. Nalbalwar
7	S.L. Kotgire	RS 20060304 24/01/2007	An Overview of Bandwidth Enhancement, ISI And Multipath Fading With Respect to OFDM	Dr. S.B. Deosarkar
8	Bhide Girish Govind	RS20140301 20/8/2014	Analysis, Simulation and Design of MSA using suitable Computational EM Method	Dr. A.B. Nandgaonkar
9	Khobragade Sanjay V.	RS20140302 21/8/2014	Some studies on Fractal Tree MSA for Multiband Application	Dr. S.L. Nalbalwar Dr. A.B. Nandgaonkar
10	Kotade Amol Bhaskar	RS20140303 19/8/2014	Analysis of PAPR reduction in OFDM based system and system performance improvement	Dr. A.B. Nandgaonkar Dr. S.L. Nalbalwar
11	Nirmal Pratima Chabbilal	RS20140304 20/8/2014	Minimizing Mutual Coupling in MIMO Antenna	Dr. A.B. Nandgaonkar Dr. S.L. Nalbalwar
12	Shinde Ashok Naganath	RS20140306 21/8/2014	Compressed Sensing for Biosignals	Dr. S.L. Nalbalwar Dr. A.B. Nandgaonkar
13	Bavkar Sandeep Sarjerao	RS20150301 10/09/2015	Human Brain Distinctiveness Analysis based on EEG	Dr. Brijesh Iyer Dr. S.B. Deosarkar
14	Jagtap Sagar Satyawan	RS20150302 10/09/2015	Some Studies on Smart Antenna for future Wireless Communication	Dr. Brijesh Iyer Dr. S.B. Deosarkar
15	Sheth Swarali Prashant	RS20150308 12/09/2015	Some Studies on Analysis, Classification and Representation of EEG Signals	Dr. S.L. Nalbalwar Dr. A.B. Nandgaonkar
16	Oak Pratik Vinayak	RS20150307 09/09/2015	Analysis and Detection of Cervix Cancer: An Image Processing Approach	Dr. Brijesh Iyer Dr. S.B. Deosarkar
17	Kadge Sushma Shankar	RS20150303 11/09/2015	Analysis and Classification of Retinal Images	Dr. S.L. Nalbalwar Dr. A.B. Nandgaonkar

18	Munde Mahesh Madanrao	RS20150306 09/09/2015	Impact Analysis of effects of RF on Human Health	Dr. S.B. Deosarkar Dr. A.B. Nandgaonkar
19	Khadase Rahul Babarao	RS20150304 10/09/2015	Design of Implantable Antenna as a Sensor for Continuous Glucose Monitoring System	Dr. A.B. Nandgaonkar
20	Uday Prakash Mithapelli	RS20150305 11/09/2015	Analysis and Classification under water signals	Dr. Brijesh Iyer Dr. S.B. Deosarkar

#### १४. विद्यापीठ व उद्योग यांच्यातील सामंजस्य

##### १४.१ विभागस्तरावरील सामंजस्य करार

१. Wifi चे संपुर्ण जोडणी करणासाठी MoU : रिलायन्स JIO मुंबई ने विद्यापीठ परिसरामध्ये WI-FI बसवणे तसेच जोडणी करण्याची सहमती दर्शविली आहे. ते विद्यापीठाकडून कुठल्याही प्रकारचा शुल्क घेणार नाहीत. हा करार करताना विद्यापीठातील तीन प्राध्यापकाच्या समितीने अणु आणि दुर विद्युत संचार आणि CM अनुब्राने यांनी कार्यालयीन शिफारस केली आणि ती विद्यापीठ पायाभूत सुविधा समितीकडे पाठवण्यात आली असून आतापर्यंत तरी मान्यता मिळाली नाही. विद्यापीठ पायाभूत समिती द्वारे संहमती दर्शवल्यानंतर स्वाक्षरी करेल.

##### २. कम्युनिकेशन लॅब डेव्हलपमेंटसाठी MoU :

रिलायन्स जिओ मुंबई ही State of the art Communication Lab विशिष्ट जबाबदारी सोबत बनवण्यासाठी तयार आहे. यामध्ये दोन विशिष्ट वर्ग खोल्या, Fibre optics setup अति गतिशील आंतरजाळे, सर्वर बसवण्यासाठी रुम. या मुद्यावर पुनरावलोकन आणि चर्चा MoU मध्ये चालु आहे. रिलायन्सर्फे काही अभ्यासक्रम MoU अंतर्गत चालवण्याचा प्रस्ताव आहे आणि यामध्ये हा अभ्यासक्रम शिकवण्यासाठी आपल्या विद्यापीठापीठातील तज्ज असतील; जर आवश्यक असल्यास त्याना प्रशिक्षण देण्यात येईल. याचा अंतिम निर्णय. हा शेवटी घेण्यात येईल.

##### ३) FDP/SDP साठी MoU :

हा MoU सोबत बनवला आणि कार्यान्वीत केला जातो. या MoU Scientech Technologies Pvt. Ltd. Indore चा प्राथमिक उद्देश खालीलप्रमाणे MoU आहे.

- १) प्रशिक्षण कार्यक्रम आयोजित करणे.
- २) संशोधन आणि विकास प्रकल्पामध्ये सार्वत्रिक सहभाग असणे.
- ३) पदवी आणि पदव्युत्तर विद्यार्थ्यांसाठी तज्ज प्राध्यापकाच्या तासिका आयोजित करणे.
- ४) औद्योगिक कंपन्यांना भेट देण्याचे नियोजित करणे.

##### १४.२ विविध उद्योगांशी निगडीत विद्यार्थ्यांचे प्रकल्प

औद्योगिक प्रकल्प हे विद्यार्थ्यांना त्यांच्या प्रत्यक्ष कामाचे जाणीव करून त्यांना त्यानंतरच्या कार्यास तयार करतात. विद्यार्थी औद्योगिक क्षेत्रातील दृष्टीकोन, ज्ञान, अनुभव व विचारसरणीच्या जोरावर वर्गात सक्षमपणे कामगिरी करू शकतात. औद्योगिक प्रकल्पांची यादी खालीलप्रमाणे :

Sr. No.	Roll No.	Name	Title of the Project	Name of the Company	Stipend
1	MT 2013 314	Ms. Monali Sonawane	Voice to the Voiceless on Android Platform	Vital Electronics & Manufacturing co. Ltd, Mahape, Navi Mumbai	Rs. 5000/-
2	MT 2013 315	Mr. Sudhir Surwase	Design of voltage controlled oscillator in cadence tool		Rs. 5000/-
3	MT 2014 312	Ms Gauri Joshi	Patient Monitoring System using Zig-bee	Ananya Academy Pune	Rs.8000/-
4	MT 2014 314	Amit Pharande	Real time monitoring and detection of different parameters in Sand	Akash Ganga Construction Pvt. Ltd., Satara	Rs.25000/-
5	MT2014 310	Chaitanya Nilkar	Compact Remote Monitoring System for Power Transformer	NITCO Ltd, Alibagh	--

### औद्योगिक भेट :

विद्यार्थ्यांच्या फायद्यासाठी विभाग, औद्योगिक भेटींची मालिका त्यांच्या निगडीत शैक्षणिक अभ्यासक्रमानुसार भेट आयोजित करते.



विद्यार्थ्यांनी Ed gate Techology च्यााIBS बॅंगलोर याठिकाणी आँकटोबर २०१५ मध्ये प्रतिनिधीशी संवाद साधला. | T.Y.B.Tech विद्यार्थ्यांनी औद्योगिक भेट दिली.

S.Y.B.Tech. विद्यार्थ्यांनी विश्वेश्वरच्या औद्योगिक आणि तंत्रशास्त्र संग्रहालयाला मार्च २०१६ मध्ये भेट दिली.



S.Y.B.Tech. विद्यार्थ्यांनी विश्वेश्वरच्या औद्योगिक आणि तंत्रशास्त्र संग्रहालयाला मार्च २०१६ मध्ये भेट दिली.



मार्च २०१६ मध्ये S.Y.B.Tech विद्यार्थ्यांनी हिंदुस्थान कोका-कोला मर्यादित बॅंगलोर ला भेट दिली.

### १५. परिसंवाद व कार्यशाळा

Sr. No.	Name of the Course	Duration	Name of the Coordinators	Eminent Speakers
1	Career in Civil Services	05/10/2015	Mr. S. V. Khobragade	Unique Academy
2	Gesture Control Robotics	03/10/2015 to 04/10/2015	Dr. S. L. Nalbalwar	Infi-Zeal Technologies, Delhi
3	Internet of Things	16/10/2015	Mr. S. V. Khobragade	Dr. D. V. Kodavade

4	Practical EM for Modern Antennas, RF and Microwave Designs	25-27/09/2015	Dr. A. B. Nandgaonkar	Entuple Technologies, Bangalore
5	Ethical Hacking	10-11/09/2015	Dr. S. L. Nalbalwar	Mr. Oops
6	Sixth Sense Robotics	05-06/09/2015	Dr. S. L. Nalbalwar	Tech Bharat, Delhi in association with COEP
7	Simtel Software	22/07/2015	Dr. A. B. Nandgaonkar	Scientech Technologies
8	Embedded System	20/08/2015	Dr. B. R. Iyer	Global Technologies
9	Pedagogy and Outcome Based Education	03/10/2015	Dr. A. B. Nandgaonkar	Dr. Revankar, Professor, YASHADA, Pune
10	A Journey from Campus to Corporate	10/10/2015	Mr. S. V. Khobragade	Grad2Guru, Mumbai
11	Recent Advances in Wireless Communication (Expert Talk for PG students)	5/12/2015	Dr. S.L. Nalbalwar	Dr. Munir Sayyad, Head, Innovation Lab, Reliance Jio, Mumbai
12	Microwave Imaging and Stealth Applications	16/01/2016	Dr. B. R. Iyer	Dr. Dharmendra Singh, IITR
13	Wall Following Robotics	06/02/2016-07/02/2016	Dr. S.L. Nalbalwar	Infi-Zeal Technologies, Delhi
14	Wavelet Transform and its applications	02/03/2016	Dr. S.L. Nalbalwar	Prof. V. M. Gadre, IITB
15	Evaluation of OSS and BSS in Telecomm	23/04/2016	Dr. S.L. Nalbalwar	Shri. Suresh Lok, Senior VP, Consulting Innovation and Evaluation for New Age Services at International Innovation, Incubation and Training center, Navi Mumbai
16	e- Governance and Chain Management	23/04/2016	Dr. S.L. Nalbalwar	Prof. P.S. Revankar, Director, Center for Information, YASHADA (Yashwantrao Chavan Academy of Development Administration), Pune
17	Opportunities in Services	23/04/2016	Dr. A.B. Nandgaonkar	Ravindra Kale, Sr. Programme Manager, Tata Communication Ltd, Mumbai
18	Vocal Tract Shape Estimation	23/04/2016	Dr. S.L. Nalbalwar	Dr. Milind Shah, Professor & Head, Department of Electronics and Telecommunication Engg. Fr. C. Rodrigues Institute of Technology, Navi Mumbai
19	Internet of Things and Cloud	23/04/2016	Mr. S. V. Khobragade	Dr. Munir Sayyad, General Manager, Reliance JIO
20	Internet Security	23/04/2016	Mr. S. V. Khobragade	Dr. Bandu Meshram, Professor, Computer Engineering VJTI, Mumbai
21	Recent trends in Antenna Design	23/04/2016	Dr. S.L. Nalbalwar	Dr. S.B. Deosarkar

17	Introduction to OBE	24/04/2016	Dr. S.L. Nalbalwar	Dr. Archana Revankar, GCoE Aurangabad
18	Key note address on present scenario of Telecommunication Industry	23/04/2016	Dr. S.L. Nalbalwar	Shri. Suresh Lok, Senior VP, Consulting Innovation and Evaluation for New age Services at International Innovation, Incubation and Training center, Navi Mumbai
19	Phase Array Antenna and Applications Dr.	23/04/2016	Dr. A.B. Nandgaonkar	Dr. Kushal Tuckle, Chairman and Director, R & D, AGV Systems Pvt. Ltd., Mumbai
20	Internet Security	23/04/2016	Dr. S.L. Nalbalwar	Professor, Computer Engineering VJTI, Mumbai
21	Industrial Meet	19/03/2016	All faculty Members	Total 17 Members from different industry attend the meeting
22	Industry and Academia Meet	23/04/2016	Hon. Vice-Chancellor	5 Members from Industry and Four Members from Academics were present

#### १७. माजी विद्यार्थ्यांचे मार्गदर्शन सत्र :

Sr. No.	Name of the Topic	Name of Alumni	Participants
1	ORACLE Systems, Database, Applications and Cloud: Overview	Anilkumar Pawar, Principal Solution Consultant, ORACLE India Private Limited	M.Tech and Final Year Students
2	Advances in Information Theory and Coding	Bhushankumar N Shinde, NDMVPSS, KABG, Thakare College of Engg Nasik	M.Tech and Final Year Students
3	Career Options after PG	Prof. Sanjay Patil, A.C. College of Engineering, Navi Mumbai	M.Tech and Final Year Students

#### १८. शिक्षक व विद्यार्थ्यांनी हजेरी लावलेल्या कार्यशाळा

Sr. No.	Title	Date	No. of Participants
1	TEQIP-KITE interaction at IITB	29 <sup>th</sup> Feb, 2016 - 01 <sup>st</sup> March, 2016	14
2	CEP-TEQIP-KITE Course on "Digital Signal Processing" at IITB	02 <sup>nd</sup> to 06 <sup>th</sup> November, 2015	03
3	CEP-Optimization at IITB	02 <sup>nd</sup> to 06 <sup>th</sup> November, 2015	05
4	Project and exhibition on DSP based projects	20 <sup>th</sup> March, 2016	20
5	India Antenna Week	June 6 <sup>th</sup> to 10 <sup>th</sup> , 2016	01

नागरी सेवेतील संधी या विषयावर युनिक अकॉडमीने ५ ऑक्टोबर २०१५ रोजी सुसंवाद / चर्चा साधला.

Intro-Zed Technology Delhi ने ३-४ ऑक्टोबर २०१५ मध्ये २ दिवसीय Gesture Control Robotics वर प्रशिक्षण आयोजित केले आहे.

#### १९. विभागामार्फत आयोजित इतर उपक्रम :

राष्ट्रीय परिसंवाद (NCCEEE) : IETE, Delhi : यांच्या संयुक्त विद्यमाने दि. २३, २४ एप्रिल २०१६ रोजी विभागाने राष्ट्रीय परिसंवाद यशस्वीरित्या आयोजन केले. यामध्ये संगणक, विद्युत आणि अणुविद्युत अंभियात्रिकी

विभाग सहभागी होत्या. या परिसंवादा दरम्यान १६ संशोधित विषय, विविध संस्था आणि भारतातील अनेक उद्योग कंपन्या, तसेच नामांकित शिक्षण संस्था जसे IIT आणि NIT यांचा सहभाग होता. या कार्यक्रमाला प्रमुख पाहुणे म्हणून श्री. सुरेश लोक, Sr. Consulting Innovation and evalution for new age services at international, Incubation and Training centre, Navi Mumbai. श्री. रविंद्र काळे, कार्यक्रम व्यवस्थापक, Tata Communication Limited, Mumbai डॉ. मुनीर सय्यद, व्यवस्थापक, Reliance JIO डॉ. बी. बी. मेश्राम, अधिव्याख्याता, संगणक अभियांत्रिकी, VJTI, Mumbai व इतर सभेला लाभलेले मान्यवर.

### माजी विद्यार्थ्यांचा मेळावा :

विभागाने दि. २४ एप्रिल २०१६ रोजी माजी विद्यार्थ्यांचा मेळावा आयोजित केला होती. २२ माजी विद्यार्थी विविध तुकडीतून उपस्थित होते. त्यांनी त्यांचा अनुभव आणि विद्यापीठातील मनोरंजक क्षण श्रोत्यांसमोर मांडले. त्यांनी विभागाकडून असलेल्या आशा, अपेक्षा व्यक्त केल्या व विभागाच्या विकासासाठी योगदान देण्याचे ठरविले. या भेटीमुळे विद्यार्थ्यांना अभियांत्रिकीनंतरच्या GATE, GIRL, TOEFL लागणारी तयारी व संशोधन क्षेत्रात असलेल्या औद्योगिक प्रशिक्षण : प्रत्येक विद्यार्थी उन्हाळी सुट्यामध्ये औद्योगिक प्रशिक्षण घेतो. यामध्ये द्वितीय (B.Tech) वर्षाचे विद्यार्थी २ आठवडे, तृतीय वर्ष ४, आठवड्यासाठी प्रशिक्षण घेतात. हे प्रशिक्षण घेऊन विद्यार्थ्यांमध्ये औद्योगिक सराब आणि आधुनिक तंत्रज्ञान विकसित करते. त्यामुळे त्यांना त्यांच्या मुख्य विषयामध्ये रस निर्माण होतो आणि त्यामुळे संशोधनाची (प्रकल्प) भावना निर्माण घेण्यास मदत होते.

### समाजसेवेशी निगडीत असलेले तांत्रिक प्रकल्प :

विद्यार्थी समाजाशी निगडीत असलेले प्रकल्प समजून घेतात. या प्रकल्पामुळे विद्यार्थ्यांना त्यांच्या सामाजिकजीवनातील समस्या जाणून घेतात. अशा प्रकारच्या समस्या सोडवण्याची संधी मिळते. यामध्ये विद्यार्थ्यांचा ग्रुप विद्यापीठाचे सभोवताली असणारे ठिकाणांना भेट देऊन त्यांच्या रोजच्या समस्यांशी विचारपुस करतात. त्याच्यावर विश्लेषण करून त्या समस्येचे निकर्ष काढून सोडवण्याचे योग्य असे साधन उपलब्ध करून देतात.

### खुल्या पुस्तक परिक्षा :

ही परिक्षा काही B.Tech आणि M. Tech च्या अभ्यासक्रमासाठी सुरु केली आहे. या परिक्षेचा मुख्य उद्देश असा कि विद्यार्थ्यांची स्मरण शक्ती पेक्षा सांकल्पनिक आकलन क्षमता आणि वैचारिक क्षमता वाढवणे. या परिक्षेमुळे विद्यार्थ्यांची निर्णायिक आणि नाविन्यपुर्ण विचार करण्याची क्षमता विकसीत करणे. या परिक्षेचे महत्त्वाचे कारण कि यामुळे शिकणे आणि शिकवणे यामध्ये सुधारणा होते.

### औद्योगिक भेट :

विभाग विद्यार्थ्यांना औद्योगिक भेटीसाठी प्रोसाहित करतो. यामुळे विद्यार्थ्यांनी विषय अभ्यासक्रम आणि चालु तंत्रज्ञानात फरक जाणून घेण्याची संधी मिळते.

खालील औद्योगिक भेटी विभागामार्फत बी.टेक आणि एम.टेक च्या विद्यार्थ्यांसाठी आयोजित केल्या होत्या

### QEEE कार्यक्रम :

विद्यापीठाने QEEE कार्यक्रमाअंतर्गत मानव संसाधन विकास मंत्रालयाच्या संयुक्त विद्यमाने IIT मद्रास मधील तासिकाच्या अंतर्गत आयोजित केल्या. या कार्यक्रमाअंतर्गत आपण तीन लेखी ॲभ्यासक्रम 3 Virtual Lab आणि ५ व्यावसायिक क्षमतावाढ.

अभ्यासी प्रयोगशाळा डॉ. एस. एल. नलबलवार आणि डॉ. एम. एस. तांदळे हे प्रणाली प्रशासक व समन्वयक कार्य करतात म्हणून अनुक्रमे कार्य करतात.

आयआयटी प्राध्यापक वर्गाकडून व्याख्यान चित्रफित NPTEL च्या माध्यमातून विद्यार्थ्यांना दाखवली जाते. यातून त्यांना प्रोत्साहित करून आकलन क्षमता आणि कार्यक्षमता (संबंधित विषयाची) वाढवली जाते. संबंधित अभ्यासक्रम हा NPTC च्या धर्तीवर तयार करण्यात आला आहे.

**GATE शिकवणी :** विभागामार्फत घेण्यात येणाऱ्या शिकवण्या अंतिम वर्षाच्या विद्यार्थ्यांना जे कि ग्रामीण भागात आहेत त्यांना याचा फायदा होतो. जो पर्यंत अंतिम परिक्षा देत नाही तो पर्यंत विभाग शिकवण्या आयोजित करते.

प्रत्येक वर्षी सर्व अंतिम बी.टेक चे विद्यार्थी या परिक्षेस पात्र ठरतात. यावर्षी ३१ विद्यार्थी परिक्षेत उत्तीर्ण झाले होते.

## २०) IETE CYNOSURE NCC EEE २०१६ सभा :



**IETE CYNOSURE NCC EEE (डावीकङ्गु उजवीकडे) डॉ.एस. एल. नलबलवार, डॉ. मिलिंद शहा, श्री. सुरेश लोक, प्रा. व्ही. जी. गायकर, डॉ. एम. ए. दाभाडे, प्रा. एस. बी. देवसरकर, डॉ. बी. बी. मेश्राम**

दोन दिवसीय राष्ट्रीय स्तरावरील कार्यक्रम IETE Cynosure-2016 हा अणुविद्युत आणि दुरसंचार अभिविभागाने दि. २३, एप्रिल, २६ एप्रिल २०१६ रोजी (IETE) दिल्लीच्या साहाय्याने आयोजित केला होता.

या कार्यक्रमाच्या उद्घाटन समारंभासाठी मा. प्रा. व्ही. जी. गायकर (कुलगुरु डॉ. बा. आ. तं. वि.) श्री. सुरेश लोक, वरिष्ठ VP. Consulting Innovation and Evaluation for Newage Service at International Innovation, Incultion & Training centre, Navi Mumbai, डॉ. एस. बी. देवसरकर, प्रा. अणु विद्युत दुरसंचार विभाग, डॉ. बी. बी. मेश्राम, प्रा. संगणक अभियांत्रिकी, VJIT, MUMBAI, डॉ. बा. आ. तं. वि., डॉ. एस. एल. नलबलवार, विभागप्रमुख, अणु आणि दुरविभाग, डॉ. B.A.T.U. , डॉ. एम. ए. दाभाडे, प्राचार्य IOPE लोणे, रविंद्र काळे, वरिष्ठ कार्यक्रम व्यवस्थापक टाटा कम्प्युनिकेशन मर्यादित, मुंबई, डॉ. मुनिर सय्यद, सामान्य व्यवस्थापक, रिलायन्स जिओ, या कार्यक्रमाचे अध्यक्ष श्री. सुरेश लोक यांनी दुरसंचार क्षेत्रातील सध्याचा विकास आणि भविष्यकाळीन याच्याबद्दल माहिती दिली. ते कार्यक्रमाच्या अध्यक्षस्थानी होते.

या कार्यक्रमामध्ये साधारण दहा प्रतिष्ठित शिक्षणतज्ज्ञ व्यावसायिक उद्योजक आणि व्यवस्थापन क्षेत्रातील विचारवंताची सविस्तर व्याख्याने अशा पद्धतीने आयोजित करण्यात आली होती की ज्यामुळे प्रत्येक प्रतिनिधीला सर्व सत्रात उपस्थित राहण्याची संधी उपलब्ध व्हावी उद्घाटन समारंभ प्रसंगी आपल्या स्वागतपर भाषणात डॉ. एस. एल. नलबलवार यांनी सर्व सहभागींना त्यांची स्वतः बदलची मन कार्यक्रमांबदलची मत आणि परिषदेतील अनुभव व्यक्त करण्यासाठी निमंत्रित केले.

त्यांनी अशी खात्री दिली की ही परिषद सर्व सहभागींना माहिती प्रसारात, बौद्धीक सुसंवादास प्रोत्साहन देण्यास आणि विचारार्थ अन्न प्रदान करण्यात व्यक्त करेल. विद्याशाखेत नवनिर्मिती आणि सृजनासाठी सहयोगाची गरज आहे. असं प्रतिपादन व्ही. एस. गायकर यांनी यावेळी केल.

समाजाच्या आणि देशाच्या प्रगतीसाठी तंत्रज्ञानाच्या वापराचे महत्त्व त्यांनी पटवून दिले. नवसृजनांसाठी शिक्षणाचे रूपांतर उपभोक्ता तंत्रज्ञानात करण्यासाठी सर्व मदतीची खाही डॉ. गायकर सरांनी या वेळी दिली.

कार्यक्रमाच्या शेवटी, प्रा. एस. व्ही. खोब्रागडे यांनी प्रत्यक्ष आणि अप्रत्यक्षपणे कार्यक्रमात सहभाग नोंदवलेल्या सर्वांच्या प्रती आभार व्यक्त केले.

देशातील विविध, संस्थातून, उद्योग क्षेत्रातून व अव्वल संस्था मधून तंत्रज्ञानविषयक शोधनिबंध आले होते. समालोचतुन ९६ प्रबंधंना मौखीक सादरकरणासाठी निवडण्यात आले होते.



Talk on Career in Civil Services by Unique Academy on 5<sup>th</sup> October, 2015



2-days Training on Gesture Control Robotics by Infi-Zeal Technologies, Delhi on 3<sup>rd</sup> - 4<sup>th</sup> October, 2015



3-days Training on Practical EM for Modern Antennas, RF and Microwave Designs By Entuple Technologies, Bangalore on 25<sup>th</sup> - 27<sup>th</sup> September, 2015



2-days Training on Ethical Hacking by Mr. Oops on 10<sup>th</sup> - 11<sup>th</sup> September, 2015



2-days Workshop on Sixth Sense Robotics by TechBharat, Delhi in association with COEP on 5<sup>th</sup> - 6<sup>th</sup> September, 2015



Expert talk on Microwave Imaging and Stealth Applications by Dr. Dhamendra Singh IITR on 16<sup>th</sup> Jan, 2016

## २०. माजी विद्यार्थ्यांचा स्नेहमेलावा



### माजी विद्यार्थ्यांचा स्नेहमेलावा:

विभागाकडून माजी विद्यार्थ्यांचा स्नेहमेलावा २४ एप्रिल, २०१६ रोजी आयोजित केला गेला होता. सर्व विद्यार्थ्यांच्या नावनोंदणीने कार्यक्रमाची सुरुवात झाली. सर्व विद्यार्थी जुन्या आठवणींना उजाळा देण्यासाठी उत्सुक होते. काही जणांनी विद्यापीठ परिसराला भेट देऊन जुन्या आठवणी जाग्या करण्याचा प्रयत्न केला. प्रा. नलबलवार व प्रा. खोब्रागडे यांनी त्या सर्वांचे स्वागत केले. कार्यक्रमात बोलताना प्रा. नलबलवार यांनी सर्व माजी विद्यार्थ्यांच्या यशाबद्दल त्यांचा गौरव केला व त्यांचा विद्यापीठाला अभुमान असल्याचे सांगितले. या विद्यार्थ्यांपैकी काही जण सरकारी आस्थापनांवर, शैक्षणिक संस्थांमध्ये व काही जण खाजगी कंपन्यांमध्ये कार्यरत आहेत. कार्यक्रमाच्या उद्घाटनानंतर

सांस्कृतिक कार्यक्रमाचे आयोजन करण्यात आले होते. काही माजी विद्यार्थ्यांनी त्यांच्या विद्यापीठातील वास्तव्यादरम्यानचे अनुभव कथन केले. त्याचबरोबर त्यांनी विभागाकडून त्यांच्या काही अपेक्षा व्यक्त केल्या व विभागाच्या विकासासाठी त्यांच्या योगदानाबद्दल सांगितले. विभागामध्ये आजी व माजी विद्यार्थ्यांचा कार्यक्रम आयोजित करण्यात आला ज्यामध्ये माजी विद्यार्थ्यांनी अभियांत्रिकी क्षेत्रातील विविध संधी, संशोधनाच्या संधी त्याचबरोबर GATE, GRE, TOEFL यांसारख्या परीक्षांसाठी तयारी करावी यासंबंधी मार्गदर्शन केले.

राहुल वाघमारे हा विद्यार्थीप्रिय माजी विद्यार्थी सदरील कार्यक्रमाला उपस्थित राहू शकला नाही परंतु त्याने एक पुस्तक विभागीय ग्रंथालयाला भेट दिले. विभागाच्या विकासासाठी विविध योजना राबवण्यासाठी माजी विद्यार्थ्यांच्या माध्यमातून एक कार्यकारी समिती स्थापन करण्याचे एकमताने ठरले. कार्यक्रमाच्या शेवटी विद्यार्थ्यांना विभागासंबंधीची पुस्तिका देण्यात आली.



## २१. विभागाचे शैक्षणिक स्तरावरील यश

### २२.१ शिक्षकांचे यश

Member of BoS: Dr. S. L. Nalbalwar has been nominated as Member Board of Studies in E & TC Engineering by University of Pune. Also nominated as members of Research Committee, VJTI, Mumbai.

Avishkar – 2015: Mr. S. V. Khobragade was selected in final round for 10th Maharashtra state Inter University Project Competition “Avishkar – 2015” in Engineering and Technology Teachers category for the project Design of fractal Microstrip Antenna for Multiband Application, organized by Government of Maharashtra during 10 – 12 January 2016 in Savitribai Phule Pune University Pune.

CCTV Procurement: Dr. S. L. Nalbalwar is appointed as Chairman by Raigad district Collector for Procurement of CCTV for various offices in the Raigad district.

INAE Research Fellowship: Dr. Brijesh Iyer has received the Indian National Academy of Engineers (INAE) Research Fellowship for the year 2015-2016.

Citation index of faculty members and impact factor are as follows

Sr. No.	Name of the Faculty	Citation index	Impact factor
1	Dr. S. L. Nalbalwar	152 (for 77 papers) h-index:7	2.07 (for 39 papers)
2	Prof. S.V. Khobrgade	14 (for 32 papers) h-index:2	1.67 (for 13 papers)
3	Dr. A.B. Nandgaonkar	--	2.28 for 6 papers)
4	Dr. Brijesh Iyer	22(15 papers), h-index-3	4.62(for 3 SCI papers)

### २२.२ विभागातील यशस्वी माजी विद्यार्थी

Pritesh Pawaskar

Staff Engineer (Flash Chip Power Management),  
Flash Component Division, LSI Corporation

Mahadu Kurkute

Sr. Project Manager in Infosys

Rajnish Telang

Sr. Staff Engineer, Orca Radio Systems  
 Mayur Desai  
 Principal Engineer, Broadcom  
 Anil Bajpai  
 Practice Head, Infosys  
 Preeti Chande  
 Business Analyst, Capgemini  
 Ranjit Khot  
 Project Manager, KPIT  
 Ranjit Somnathan  
 Vice President, Credit Suisse  
 Vijay Shepunde  
 Manager, Capgemini  
 Sourabh Bandopadhyay  
 Manager, Industry Solution Group, Cisco Systems  
 Mandar Patil  
 Staff Verification Engineer, Infinera  
 Shashank Nafde  
 Associated Project Manager, HCL Technologies  
 Anand Zambre  
 Assistant Consultant, TCS

### **विद्यार्थ्यांनी संपादन केलेले यश**

List of students Qualified the Gate 2016 Examination is as follows:

Sr. No.	Name	Gate Marks	Sr. No.	Name	Gate Marks
1	Saurabh Wakshe	26.9	16	RaghavDespendande	30
2	Saurabh Karanglkar	34.76	17	Ramdas Khade	26
3	Mikhil Gupta	30.48	18	Kailash Khaire	22.06
4	Shital Tadshan	25.83	19	Vaibhav Gaikwad	29
5	Ashwini Wagh	19.03	20	Purnima Kalekar	30
6	Tirupati Hende	37.27	21	Yogesh Jadhav	34
7	Pramod Borkar	27.29	22	Ashish Khobragade	34
8	Gaurav Gaikwad	25.26	23	Gopisingh Naik	28
9	Vinay Ghavant	25.74	24	Riyaz Shaikh	29
10	Dnyaneshwar Gavhane	25.29	25	Megha Sonawane	28
11	Dipak Aher	24.37	26	Aditya Pawar	29
12	Kiran Kurankar	18.80	27	Sumit Rai	34
13	Ashish Shendre	31.3	28	Swapnesh Shinde	25
14	Umesh Gharmade	25	29	Sarwesh Satpute	28.04
15	Nitin Gorode	32	30	Priyanka Govardhan	26.04

Paper publication by the students: Students publish their research papers regularly in national/ international conferences and journals. About 50 papers have been published by the students in the current academic year  
 GRE: One student from final year B. Tech –Neha Thigole got 319 out of 340 in GRE

21. TEESA - हि विद्यार्थीकेंद्रित समिती असून विद्यार्थ्यांच्या व्यक्तिमत्व विकासासाठी गठीत करण्यात आली आहे.  
 विविध प्रकारच्या तंत्रज्ञानविषयक व सांस्कृतिक कार्यक्रम आयोजित करण्याची जबाबदारी ह्या समितीची आहे.

### **TEESA committee for the academic year 2015-2016**

Sr.	Name	Designation	Responsibility
1.	Mr. Rishi Koul	President	Yearly student activity planning, control and execution, bridge between student and faculty advisor and HOD

2.	Mr. Kailas Kokare	Secretary	Maintenance of financial record of TESSA
3.	Mr. Yatish Jadhav	Social Activity Coordinator	Coordination and planning of social activities for the student in consultation with the President
4.	Mr. Rishikesh Munde	Student Counselling Cell Coordinator	Identification of the student who need the counselling on various issues in the campus and off the campus, coordinate faculty and student meeting for the counselling
5.	Mr. Vijay Jamdar	Cultural Activity Coordinator	Coordination and planning of cultural activities for the student in consultation with the President
	Ms. Nilam Shilimkar		
6.	Mr. Ganesh Mane Mr. Rishikesh Khairkar	Sports Activity Coordinator	Coordination and planning of sports activities for the student in consultation with the President
7.	Mr. Abhijit Bhadre Ms. Priyanka Govardhan	Technical Coordinator	Coordination and planning of Technical activities for the student in consultation with the President
8.	Mr. Abhijeet Maske Mr. Abhijeet Suryawanshi Mr. Onkar Shewalkar Mr. Gitesh Shewatkar Mr. Sanket Birajdar Mr. Onkar Phane	News Room Activity Coordinator	Updates of recent events, current news and progress in science and technology to the student via notice board. Preparation of quarterly news bulletins for the students
9.	CR of DIV-A CR of DIV-B	First Year Representative	Coordination of the class with TESSA activities via its committee members.
10.	Mr. Amol Rathod Mr. Vadant Kulkarni	Second Year Representative	
11.	Mr. Akash Warkhede Mr. Manoj Kokane	Third Year Representative	

### **Abhiyanta Vasant 2016 (Literature/Cultural Events)**

Marathi debate: Silver - Yatish Jadhav, Ramesh Koli

Marathi elocution: Gold Ramesh Koli

Hindi elocution: Silver Saurabh Suman

Poetry: Gold Ramesh Koli

Painting / Poster: Gold Saurabh Suman

Clay modeling: Gold Yugant Ambekar

Rangoli: Silver Akanksha Kagade

Spot photography: Silver Sarang Gaikhar

Ad-Mad: Gold Nilam Shilimkar, Rishi Kaul, Ramesh Koli, Vijay Jamdar, Yatish Jadhav

Group Dance Gold Harshali Bapat, Purna Kamat, Shradha Kamble, Supriya Kamble

Divya Yadav, Rajashree Khandekar

Best Actor Ramesh Koli

Best Actor in Skit Vijay Jamdar

Dance Gold Asmita Kamble

Duet Dance Silver Samiksha Sorde, Shubhangi Nirbhawne

Lavani Silver Shubhangi Nirbhawne

Singing Gold Vikrant Kamble

22. TEESA ने आयोजित केलेले तंत्रज्ञान विषयक कार्यक्रम MicroMouse (Technical Event- Cynosre 2k16)

Ignite (Technical Event- Cynosre 2k16)		Micro App (Technical Event- Cynosre 2k16)

### २३. विभागाची बलस्थाने, कमतरता, संधी व आव्हाने

#### बलस्थाने

- Highly dedicated and motivated faculty members.
- The curriculum design is a perfect blend of Electronics, Communication and Computing Technologies.
- The Department regularly gets handful amount of funding from AICTE, UGC, and State Government by way of various research or other projects.
- Guidance and support from Alumni.
- Research publications by faculty members.
- Well equipped labs for UG, PG as well Research Scholars.

#### कमतरता

- Departmental maintenance, etc: Most of the minor problems related to maintenance & installation are handled in the department itself. These problems are solved with the help of laboratory assistant and Department students. For major problem such as repairing of PC motherboards, trainer kits, UPS controller, test and measurements equipments Department does not have maintenance & repair facility. Some of the equipments and PCs are obsolete hence are required to be replaced by new equipments.
- Lack of adequate space for laboratory and class room: The Department intake is of 120 students, it is difficult to manage classes, examination and practical, in the space allotted to the Department.
- Faculty shortage: Presently faculty strength of the Department is seven (01+01+05). As per the norm, faculty strength of the Department should be equal to 35. However, Department activities are carried out by appointing faculty on contract basis and also by appointing teaching assistants.

#### संधी

- The budding graduates from this discipline have very good job opportunities in VLSI Technologies, Embedded Systems, Signal Processing, Radio Frequency (RF) Communication, Mobile communication and in Software Engineering.
- Every year many of our students getting placement in reputed industries like Infosys, TCS, Cognizant, Persistent, Siemens, Huawei, Reliance Communication, Videocon, , BHEL, BEL, GE, L & T, Sasken, MBT, Texas, Accenture, Motorola, Flextronics, NVIDIA, Tataelxsi, BSE etc.

#### आव्हाने

- Managing all Departmental activities with the help of available faculty members.
- Recruitment of qualified faculty members having Ph.D. qualifications
- Attracting creamy students for UG, PG and Ph.D. programmes.exas, Accenture, Motorola, Flextronics, NVIDIA, Tataelxsi, BSE etc.



## माहिती तंत्रज्ञान विभाग



डॉ. जाधव शिवाजीराव माणिकराव  
सहयोगी प्राध्यापक व विभाग प्रमुख

### १) विभागप्रमुखांचा संदेश :

मला माहिती तंत्रज्ञान विभागाच्या शैक्षणिक वर्ष २०१५-२०१६ चा वार्षिक अहवाल सादर करताना अतिशय आनंद होत आहे. माहिती तंत्रज्ञान विभाग नाविन्यपूर्ण व गुणवत्तापूर्ण शिक्षण पुरविण्यासाठी नेहमीच प्रयत्नशील असेल. 'गुणवत्तापूर्ण व तंत्रज्ञानावर आधारित शिक्षण प्रदान करणे' हेच आमच्या विभागाचे बोधवाक्य आहे.

शिक्षण प्रक्रिया ही आयुष्यात फार महत्वाची आहे. तुम्ही काय, कसे, कोणत्या शिक्षण संस्थेतून शिक्षण घेत आहात हे एखाद्याच्या कारकिर्दीशिवाय बौद्धिक कार्यक्षमता ठरविण्यात प्रमुख भूमिका बजावते. माहिती तंत्रज्ञान विभाग "Free and Open Source System and Recent Software Tools and Technologies" या विषयावर प्रशिक्षण देण्याच्या प्रक्रियेत सहभागी आहे.

### २) ध्येय आणि उद्दिष्टे :

ध्येय : प्रभावी खर्चामध्ये व्यवस्थापन, शैक्षणिक आणि समाज सेवेसाठी उपयोगी असणारे उच्च शैक्षणिक गुणवत्ता, तंत्रज्ञान आधारित शिक्षण संक्रमित करणे.

उद्दिष्टे : आधुनिक तंत्रज्ञानाचा विद्यार्थी व कर्मचारी यांना पुरवठा करणे. नियोजनबद्द कार्यक्रमाची रुपरेषा ठरवणे, प्रशिक्षण देणे, सल्ला देणे आणि इतर काही कामांसाठी संगणकीय आधुनिक तंत्रज्ञानाची सुविधा पुरवून विद्यार्थीठाचे उद्दिष्टे पूर्ण करण्यासाठी मदत करणे. विद्यार्थी व उद्योग समूहाच्या संबंधाचा विकास, विस्तार, नातेसंबंध जपून पारदर्शक, जलद गतीने माहिती स्रोत विकास करून व्यावहारिक कार्यासंबंध वाढविणे. अत्यंत प्रभावी, विश्वसनीय, सुरक्षित, नाविन्यपूर्ण माहिती स्रोतांचा विकास व विश्वसनीय देखभाल करून प्रशासकीय, प्रशिक्षण देणे व संशोधन कार्यात मदत करणे. संगणकीय माहितीचा संग्रह, साठवण करून योग्य व नाविन्यपूर्ण उपाययोजनाच्या वापराचा खात्री करून घेणे.

### ३) विभागाविषयी :

माहिती तंत्रज्ञान विभाग २००१ मध्ये बी.टेक पदवी अभ्यासक्रम ६० विद्यार्थ्यांच्या प्रवेशक्षमतेसह संगणक अभियांत्रिकी विभागाअंतर्गत सुरु झाला. सन २००४ साली माहिती तंत्रज्ञान विभागाचे स्वतंत्रपणे कामकाज सुरु झाले. सन २०१५ साली पहिल्या संशोधन विद्यार्थ्यांची संशोधन अभ्यासक्रमासाठी माहिती तंत्रज्ञान विभागात नोंदणी झाली. विभागात सात नियमित अध्यापक, तीन प्रयोगशाळा सहाय्यक, एक प्रयोगशाळा मदतनीस कार्यरत आहेत.

### ४) शैक्षणिक कार्यक्रमाची उद्दिष्टे आणि निष्पत्ती :

माहिती तंत्रज्ञान शाखेच्या पदवीधाराला तीन प्रकारचे ज्ञान किंवा माहिती असणे अपेक्षित आहे.

१) पदवीधाराला माहिती तंत्रज्ञान शाखेतील मूळ विषयाची संकल्पनेचे ज्ञान असले पाहिजे.

२) पदवीधाराला विविध संगणकीय आज्ञावलीची मुळाशी असलेले गणितीय संकल्पनेची माहिती असणे गरजेचे आहे.

३) माहिती तंत्रज्ञान शाखेतील पदवीधाराला शाखेतील आधुनिक तंत्रज्ञान व साधनांची पूर्ण माहिती असणे गरजेचे आहे जेणेकरून ह्या ज्ञानाचा उपयोग तो दैनंदिन जीवनातील समस्या सोडवून जीवन सुखद सुलभ करू शकेल. डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यार्थीठातील माहिती तंत्रज्ञान शाखेतील पदवीधाराकडून भरपूर अपेक्षा आहेत. त्याचबरोबर माहिती तंत्रज्ञान शाखेला 'तंत्रज्ञान सुधारित शिक्षण' राष्ट्रीय कार्यक्रम (NPTEL) नियमानुसार बनविलेला अभ्यासक्रम पाळणे बंधनकारक आहे. काही विशिष्ट शैक्षणिक उद्दिष्टे जागतिक व प्रांतीक अपेक्षापूर्ती करण्यासाठी खाली नमूद केली आहे.

उद्दिष्टे अभिज्ञापक	उद्दिष्टे
PE01	संगणकीय आज्ञावालीसाठी उपयुक्त असणारे गणितीय संकल्पना ज्ञान पुरविणे.
PE02	माहिती प्रणालीचे विश्लेषण, मूळ समस्येचा आराखडा तयार करणे, अंमलबजावणी करणे, कृतीत उतरविण्यासाठी अशा गहन (गुंतागुंतीची) समस्या सोडविण्यासाठी क्षमता विकसित करणे.
PE03	अतिशय मोठी संगणकीय प्रणालीची रचना कौशल्याचे ज्ञान पुरविणे.
PE04	विज्ञान आणि तंत्रज्ञान शाखेतील समस्येवर संगणकीय तंत्रज्ञानावर आधारित तोडगा/उपाय सुचावण्यासाठीची क्षमता विकसित करणे.
PE05	माहिती व संवाद तंत्रज्ञान क्षेत्रात होणाऱ्या जलद बदलाशी जुळवून घेण्यासाठीचे कौशल्य विकसित करणे.
PE06	समाजामध्ये माहिती आणि संवाद तंत्रज्ञानाचा मोरुचा प्रमाणात वापर केल्यामुळे निर्माण होणाऱ्या समस्यांचे ज्ञान पुरविणे.

चार वर्षांच्या अंती माहिती तंत्रज्ञान विभागाच्या विद्यार्थ्यांच्या अंगी दैनंदिन जीवनातील समस्येवर संगणकीय तोडगा काढण्याचे कौशल्य विकसित होते. माहिती तंत्रज्ञान शाखेतील पदवीधराला खालील नमूद केलेल्या कौशल्याचे प्रात्यक्षिक दाखवण्याची क्षमता अंगी असली पाहिजे.

परिणाम अभिज्ञापक	परिणाम
P01	पदवीधरला 'गणितीय रचना व सांख्यिकीय पद्धत' या विषयाचे ज्ञान अवगत होईल.
P02	पदवीधरला तर्कशास्त्राचा प्रात्यक्षिक दाखवून कारणावर आधारित प्रणाली (Reasoning based system) दर्शवता येईल.
P03	पदवीधराच्या अंगी "Finite Automata आणि Probability" या विषयीची रचना व विश्लेषण करण्याकरता गणितीय औपचारिकतेचे ज्ञान अवगत होईल.
P04	पदवीधराला संगणकीय भाषा व संगणकीय तंत्रज्ञानावर आधारित प्रणाली विकसीत करण्याकरिता आवश्यक संकल्पनाचे ज्ञान अवगत होईल.
P05	पदवीधराला समस्येचे विश्लेषण करून Algorithmic उपाय सुचवणे व पर्यायी उपायाचे मूल्यमापन करण्याची क्षमता अंगी येईल.
P06	पदवीधराला "Database orientation, object orientation" या मूळ संगणकीय आज्ञावालीवर आधारित तंत्रज्ञानाचे सखोल ज्ञान अवगत होईल.
P07	पदवीधराला आर्थिक, पर्यावरण, परिसर व सामाजिक क्षेत्रात वापरले जाणारे माहिती तंत्रज्ञानावर आधारित उपायांच्या परिणामाची समज असेल.
P08	पदवीधराला विश्लेषणात्मक साधनांचा वापर आवश्यक गरजा गोळा करून, विश्लेषण करून संबंधित माहितीचा वापर माहिती तंत्रज्ञान आधारित उपाययोजना प्रदान करण्याचे प्रात्यक्षिक दाखविता येईल.
P09	पदवीधराला संगणकीय आधारित उपाय प्रदान करण्याकरता तंत्रज्ञान रचनात्मक नियम व नमुन्याचे ज्ञान असेल.
P10	पदवीधराला मानव-संगणक संवाद घडवून आणण्यासाठी सोयीस्कर 'देवाणघेवाण प्रणाली' विकसित करण्याचे प्रात्यक्षिक दाखवण्याची क्षमता असेल.
P11	पदवीधराला "Operating System, Database and Computer Network" चे ज्ञान अंगी असेल.

P12	पदवीधराला अभियांत्रिकी क्षेत्रासंबंधीच्या नवनवीन कल्पना सुचवण्याचे श्रवण व शाब्दिक स्वरूपात लिहिण्याचे कौशल्य असेल.
P13	पदवीधराला 'माहिती तंत्रज्ञानावर आधारित उपाय योजनेच्या नैतिक बाबींची माहिती असेल.
P14	पदवीधराला नैतिक समस्या सोडवण्याची वृती व क्षमता अंगी असेल. पदवीधराला समूहामध्ये मिळून मिसळून काम करण्याच्या क्षमतेचे प्रात्यक्षिक दाखविता येईल.
P15	पदवीधराला OS, DBMS, WT, Compilers, middleware and interest protocols in realizing distributed information, environment यासारख्या संगणकीय प्रणालीच्या कामाचे ज्ञान असेल.

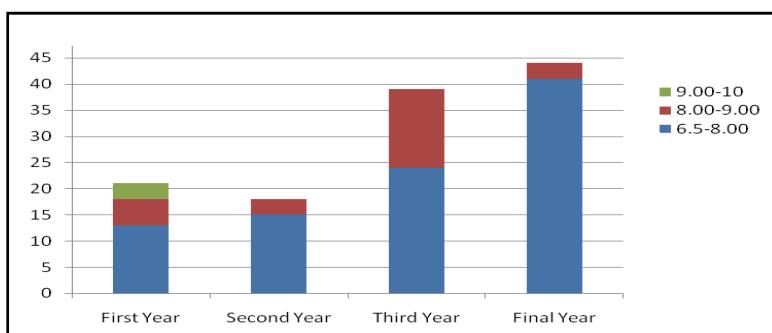
#### ५. शैक्षणिक कार्यक्रमाचे विहंगावलोकन :

शैक्षणिक कार्यक्रम	कार्यकाल	प्रवेश क्षमता
माहिती तंत्रज्ञान अभियांत्रिकी पदवी	४ वर्ष	६०

#### ५.१ पदवी विद्यार्थ्यांची सांख्यिकी माहिती :

अनु. क्र.	लिंग	वर्ष			एकूण
		द्वितीय वर्ष	तृतीय वर्ष	अंतिम वर्ष	
१	स्त्री	३८	४१	४६	१२५
२	पुरुष	३४	३४	३३	१०१
	एकूण	७२	७५	७९	२२६
अनु. क्र.	श्रेणी	वर्ष			एकूण
		द्वितीय वर्ष	तृतीय वर्ष	अंतिम वर्ष	
१	अनुसूचित जाती	१०	१०	९	२९
२	अनुसूचित जमाती	४	४	५	१३
३	इ. मा. व.	२५	२०	२१	६६
४	खुला	२५	२८	३२	८५
५	विशेष मागास प्रवर्ग	०	५	२	७
६	भटक्या जमाती	७	८	१०	२५
७	जम्मु व काश्मीर	१	०	०	१
	एकूण	७२	७५	७९	२२६

#### ५.२ निकाल विश्लेषण



## ५.३ विद्यार्थ्यांनी मिळवलेल्या नोकच्यांचा तपशील :

Details of students placed during year (2015-16)

अनु. क्र.	विद्यार्थ्यांचे नाव	कंपनीचे नाव
१)	वैभव इनामदार	L & T InfoTech
२)	स्नेहल कशेत्री	
३)	अक्षदा साळुंके	
४)	मधुरा कानेटकर	
५)	अक्षय भाऊसाहेब लवाटे	Shatkone PVT Ltd., Pune
६)	अर्जिक्य नारायण मुथाळ	CA Technology , Mumbai
७)	अलोककुमार विनोद मिश्रा	Dimension NXG ,Mumbai
८)	कविता पाटील	Optinno Mobitech Pvt. Ltd.

## ६. अध्यापक आणि कर्मचारी वर्ग

### ६.१ नियमित अध्यापक :

	<b>डॉ. जाधव शिवाजीराव</b> <b>माणिकराव :</b> अभियांत्रिकी पदवी (CSE), SGGS नांदेड, पदव्युत्तर अभियांत्रिकी (CE), VJTI, मुंबई पीएच.डी. DBATU लोणेरे <b>संशोधन विषय :</b> Soft Comuting and Machine Learning, Hybrid Neural Networks, Biomedical Signal Analysis. <b>अध्यापन अनुभव :</b> २३ वर्षे		<b>प्रा. सुतार संजय रघुनाथ :</b> अभियांत्रिकी पदवी (संगणक अभियांत्रिकी), WCE सांगली. पदव्युत्तर अभियांत्रिकी (संगणक अभियांत्रिकी), DBATU लोणेरे. पीएच.डी. चालू SGGS, नांदेड. आवडीचे संशोधन विषय : Scheduling, Evolutionary Algorithms अध्यापन अनुभव : २० वर्षे.
	<b>प्रा. कदम विनोद जगन्नाथ :</b> अभियांत्रिकी पदवी (माहिती तंत्रज्ञान), शिवाजी विद्यापीठ, कोल्हापूर. पदव्युत्तर अभियांत्रिकी (संगणक अभियांत्रिकी), डॉ. बाबासाहेब आंबेडकर, तंत्रशास्त्र विद्यापीठ लोणेरे. आवडीचे संशोधन विषय : * Data Mining * Machine Learning, अध्यापन अनुभव : ११ वर्षे.		<b>प्रा. बाभुलगावकर अरुण रामराव :</b> अभियांत्रिकी पदवी (संगणक अभियांत्रिकी), BAMU औरंगाबाद. पदव्युत्तर अभियांत्रिकी (संगणक अभियांत्रिकी), DBATU, संशोधन अभ्यासक WCE सांगली. संशोधन विषय : * natural Language Processing, * Compiler Construction, अध्यापन अनुभव : १३ वर्षे

	<p><b>प्रा. भरड सोनाली वासुदेवराव :</b>          अभियांत्रिकी पदवी (माहिती तंत्रज्ञान), डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ-ओरंगाबाद, पदव्युत्तर अभियांत्रिकी (संगणक अभियांत्रिकी), डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठ लोणेरे. आवडीचे संशोधन विषय : * Natural Language processing          अध्यापन अनुभव : ९ वर्षे.</p>		<p><b>प्रा. बर्के सपना शिवाजी :</b>          अभियांत्रिकी पदवी (माहिती तंत्रज्ञान), अण्णासाहेब डांगे अभियांत्रिकी आणि तंत्रज्ञान महाविद्यालय, अष्टा-सांगली. पदव्युत्तर अभियांत्रिकी (संगणक अभियांत्रिकी), डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठ लोणेरे. आवडीचे संशोधन विषय : * Software Engineering * Software Testing, अध्यापन अनुभव : ९ वर्षे.</p>
	<p><b>प्रा. हिवरे साधना रानोजीराव :</b>          अभियांत्रिकी पदवी (माहिती तंत्रज्ञान), डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ-ओरंगाबाद. पदव्युत्तर अभियांत्रिकी (संगणक अभियांत्रिकी), डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठ लोणेरे. आवडीचे संशोधन विषय : Software Engineering          अध्यापन अनुभव : ९ वर्षे.</p>		<p><b>सौ. गायकवाड भक्ती निलेश :</b>          पदवी अभियांत्रिकी (संगणक अभियांत्रिकी), डॉ. बाबासाहेब मराठवाडा विद्यापीठ लोणेरे, पदव्युत्तर (संगणक अभियांत्रिकी) Recrt चंद्रपुर.          आवडीचे संशोधन विषय : Information Security          अध्यापन अनुभव : ३ वर्षे.</p>

### 6.3 कर्मचारी वर्ग :

	<p><b>श्री. पेंढारी प्रशांत परशुराम :</b> हुदा / पदनाम - प्रयोगशाळा सहाय्यक तांत्रिक पात्रता : संगणक हार्डवेअर आणि नेटवर्किंग तंत्रज्ञान, संगणक हार्डवेअर देखभाल आणि नेटवर्किंग पदवीका.</p>		<p><b>श्री. पाटील अपेक्षित कांतीलाल,</b> हुदा/पदनाम - प्रयोगशाळा सहाय्यक, पात्रता : पदवीका यांत्रिकी अभियांत्रिकी</p>
	<p><b>श्री. रवींद्र बारक हटकर :</b> हुदा/पदनाम - प्रयोगशाळा पिरचर.</p>		

**७) अध्यापकीय कर्मचाऱ्यांच्या जबाबदाऱ्या :**

**१) डॉ. जाधव शिवाजीराव माणिकराव**

- १) विभागप्रमुख, माहिती तंत्रज्ञान अभियांत्रिकी विभाग.
- २) संयोजक, (AICTE Setup)
- ३) सदस्य, शैक्षणिक परिषद, डॉ. बाबासाहेब आंबेडकर तंत्रज्ञान विद्यापीठ, लोणे.
- ४) अध्यक्ष, अभ्यासक्रम निर्मिती मंडळ, माहिती तंत्रज्ञान विभाग
- ५) TEQIP MIS (संघ सदस्य)
- ६) समन्वयक, Oracle work force development programme of oracle university.
- ७) समन्वयक, free and open source software विद्यार्थी, शिक्षक व कर्मचाऱ्यांना प्रशिक्षण देणे.
- ८) समन्वयक, Microsoft वापराचा लेखापरीक्षण करणे.
- ९) समन्वयक, विद्यार्थ्यांच्या शैक्षणिक प्रकल्पाद्वारे विद्यापीठास उपयोगी असणारी संगणकीय आज्ञावली तयार करून घेणे.

**२) प्रा. सुतार संजय खुनाथ :**

- १) समन्वयक, Railtel Interent Facility
- २) समन्वयक, TEQIP संस्थांतर्गत सुधारणा समिती
- ३) सदस्य, अभ्यासक्रम निर्मिती समिती, माहिती तंत्रज्ञान अभियांत्रिकी विभाग.
- ४) समन्वयक, संगणकीय आज्ञावली द्वारे वैकल्पिक विषय निवड करणे.

**३) प्रा. कदम विनोद जगन्नाथ**

- १) समन्वयक, DTE Admission Reporting Center 3033.
- २) समन्वयक, प्रवेश सुविधा केंद्र
- ३) विद्यापीठ स्तरावरील प्रवेश प्रक्रिया समन्वयक (प्रथम वर्ष अभियांत्रिकी, थेट द्वितीय वर्ष अभियांत्रिकी, प्रथम वर्ष पदव्युत्तर अभ्यासक्रम अभियांत्रिकी)
- ४) सदस्य, (संस्था स्तरावरील), TEQIP संस्था व उद्योग संवाद समिती
- ५) सदस्य, अभ्यासक्रम निर्मिती समिती, माहिती तंत्रज्ञान विभाग.

**४) प्रा. बाभुलगावकर अरुण रामराव :**

- १) विभागीय समन्वयक,
- २) समन्वयक, FIT (विद्यार्थी संघटना माहिती तंत्रज्ञान अभियांत्रिकी).
- ३) विभागीय समन्वयक, विद्यार्थी समुपदेशन आणि व्यवसाय मार्गदर्शन.

**५) प्रा. भरड सोनाली वासुदेवराव**

- १) मलयगिरी वसतिगृह अधिक्षक
- २) विभागीय सचिव बैठक

**६) प्रा. बर्फे सपना शिवाजी**

- १) धवलगिरी वसतिगृह अधिक्षक
- २) समन्वयक, TPCS आणि औद्योगिक प्रशिक्षण
- ३) सदस्य, महिला तक्रार निवारण समिती

**७) प्रा. हिवरे साधना रानोजीराव**

- १) सदस्य, Cynosure तांत्रिक कार्यक्रम समिती
- २) सदस्य, वार्षिक अहवाल समिती
- ३) सदस्य, विद्यापीठ माजी विद्यार्थी माहिती गोळा करणे समिती
- ४) समन्वयक, विभागीय स्तरावरील प्रकल्प व परिसंचाद
- ५) समन्वयक, विभागीय शैक्षणिक वेळापत्रक तयार करणे

## ८) विभागीय अभ्यास मंडळ

अ. क्र.	नाव	
१.	डॉ. जाधव शिवाजीराव माणिकराव, विभागप्रमुख, माहिती तंत्रज्ञान अभियांत्रिकी विभाग, डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठ लोणेरे - रायगड	अध्यक्ष
२.	प्रा. यो. ना. पाटील, इंस्टिट्यूट ऑफ पेट्रोकेमिकल इंजिनीअरींग, लोणेरे - रायगड	सदस्य
३.	श्री. संजय गांधी, Jetking भारत, पुणे	तज्ज्ञ
४.	प्रा. सुतार संजय रघुनाथ, माहिती तंत्रज्ञान अभियांत्रिकी विभाग डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठ लोणेरे - रायगड	निवड केलेले सहकारी, सदस्य
५.	प्रा. कदम विनोद जगन्नाथ, माहिती तंत्रज्ञान विभाग डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठ लोणेरे - रायगड	निवड केलेले सहकारी, सदस्य

### ९) संशोधन आणि प्रकाशने :

#### ९.१ संशोधन प्रकाशने :

- १) प्रा. कदम विनोद जगन्नाथ, श्री. संकेत ना. येरेकर, "Face Recognition Based Automated Students Attendance and Reporting System", International Journal of Recent Advances in Engineering and technology (IJRAFT) डिसेंबर २०१५.
- २) प्रा. कदम विनोद जगन्नाथ, श्री. श्रीराज एन. जोशी, "Cloud Computing and Its Service Providers", International Journal of Recent Advances in Engineering and Technology (IJRAET) डिसेंबर २०१५.
- ३) प्रा. कदम विनोद जगन्नाथ, श्री. अविनाश डी. तायडे, "Audroid Based Intelligent House Door Lock Security System", International Journal of Recent Advances in Engineering and Technology (IJRAET) डिसेंबर २०१५.
- ४) प्रा. कदम विनोद जगन्नाथ, कु. पूराजक्ता एस. पाटील, Face Recognition Approaches-Revisited Intl Journal of Recent Advances in Engineering and Techonology (IJRAET) डिसेंबर २०१५.

#### १०) प्रयोगशाळा

##### १०.१ प्रयोगशाळा खर्च

अ. क्र.	माहिती तंत्रज्ञान	प्रमाण	एकूण किंमत
०१	Multi-media projector with wireless connectivity Between PC & Projector Model No. PJWX2240 with WPS dongle Resolution : 1280 x 800 WXGA, ANSI Lumen : 3000	०२	₹२५०८.००

#### ११) प्रकल्प

##### ११.१ पदवी विद्यार्थ्यांचे महत्वाचे प्रकल्प

अ. क्र.	प्रकल्प विषय
1	College Ranking System
2	Network Based Modelling and Intelligent data mining of Social Media for improving care
3	CHATBOOK

4	Latur Municipal Website
5	Automatic Timetable Generator
6	Property Manage
7	Security in Online Data Storage
8	Import Export Portal
9	IT Ticket Login System

10	Computer Lab Management	20	Online Shopping Cart
11	Offline Digital Library	21	Alumini Management System
12	A Location Based Reminder Application on Android Platform	22	IQ Prediction
13	Suspicious Object Detection	23	Online Shopping
14	Information Extraction	24	English to Marathi Translation
15	Machine Translation	25	Image Segregation System
16	Hand Gesture Recognition	26	Student Unique Identification in University
17	Campus Management System	27	Lost articles and Letter Reconciliation system
18	Data Leakage Prevention	28	Document Mining
19	CHARM		

### ११.२ पदवी विद्यार्थ्यांचे समाज उपयोगी प्रकल्प

अ. क्र.	समाज उपयोगी प्रकल्प विषय
1	Project Guide Allotment System
2	Cake Shop Management System
3	NCC Website
4	Honda Car Models Shop Management System
5	Bike Mania Website for Bike Shop
6	Class Selection Registration System
7	Online Crime File Management
8	Elective Allotment
9	Book-bank Management System/ Stegnography
10	Poly-house Desktop Publication
11	Gift Shop Management System

12	Order Tracking System
13	Telephone Billing System
14	Student Online Help System
15	Pharmacy Management System
16	School Management System
17	Warehouse Management System
18	Library Management System
19	Aadhar Secure Travel Agency
20	Online Feedback System
21	Autoshop
22	Automatic Railway Gate Controller

### ११.३ प्रकल्प

- e-Affiliation
- e-Attendance
- e-Store
- e-Governance
- Student Tracking System
- University Campus Map Navigator
- IT Department Website

### १२ संशोधन कार्यक्रम

#### संशोधन विद्यार्थी

अ. क्र.	नाव	नोंदणी क्रमांक/दिनांक	संशोधन क्षेत्र	संशोधन मार्गदर्शक
१)	श्री. स.श्री. यादव	RRS20151101 १२ सप्टेंबर २०१५	Medical diagnosis using soft computing techniques	डॉ. जाधव शि. मा.

**१३) अध्यापक, संशोधन विद्वान आणि विद्यार्थी उपस्थित असलेले कार्यशाळा/संमेलने**

अ.क्र.	शिर्षक	तारीख	सहभागी अध्यापक
१)	"Recent Trends in Energy Research", रसायन व यांत्रिक अभियांत्रिकी विभाग, डॉ. बाबासाहेब आंबेडकर तंत्रज्ञान विद्यापीठ लोणे-रायगड द्वारा आयोजित	१७-११ डिसेंबर २०१५	०३
२)	"SCILAB & SCICOS (Open source alternative to Matelab & Simulink) : Learning by Doing", विद्युत अभियांत्रिकी विभाग, सरकारी अभियांत्रिकी	१७-२८ मे २०१६	०२
३)	"Migration to open source platform" माहिती तंत्रज्ञान विभाग, डॉ. बाबासाहेब आंबेडकर तंत्रज्ञान विद्यापीठ लोणे-रायगड द्वारा आयोजित	३१ ऑक्टोबर, २०१५	०७
४)	"Recent Trends in Cyber Security", माहिती तंत्रज्ञान अभियांत्रिकी विभाग, MMCOE पुणे द्वारा आयोजित	१४-१८ डिसेंबर, २०१५	०२
५)	Two days workshop on Introduction to Robotics, conducted by IIT, Bombay द्वारा आयोजित	१८-१९ जानेवारी २०१६	०२
६)	Research Symposium-3, श्री. गुरु गोविंदसिंहजी अभियांत्रिकी आणि तंत्रज्ञान संस्था, नांदेड द्वारा आयोजित	२५-२६ जुलै, २०१६	०२
७)	Research Symposium-4, श्री. गुरु गोविंदसिंहजी अभियांत्रिकी आणि तंत्रज्ञान संस्था, नांदेड द्वारा आयोजित	१२-१३ मार्च, २०१६	०१
८)	International Conference on Recent Trends in Tech, विज्ञान आणि अभियांत्रिकी संस्था, अमरावती द्वारा आयोजित	२९ डिसेंबर २०१५	०४

**१४) औद्योगिक संस्था भेट :**

माहिती तंत्रज्ञान अभियांत्रिकी विभागाच्या विद्यार्थ्यांना औद्योगिक भेटीसाठी सहभागी होण्याठी नेहमी - प्रेरणा व प्रोत्साहन देते. ह्या संधीमुळे विद्यार्थी चालू नवीन तंत्रज्ञान व अभ्यासक्रम या दरम्यानचे अंतर भरण्यासाठी विभागाने ४ मार्च २०१६ रोजी तृतीय वर्ष माहिती तंत्रज्ञान अभियांत्रिकी विद्यार्थ्यांन करिता "Persistant Systems", पुणे येथे औद्योगिक भेट आयोजित केली होती.

**१५) TEQIP - 2 अंतर्गत आयोजित प्रशिक्षण आणि कार्यशाळा :**

Sr. No.	Name of the Course	Duration	Name of the Co-ordinator	Eminent Speaker
1	Migration to open source platform	०१ दिवस	डॉ. शि. मा. जाधव	श्री. कृष्णकांत माने, संशोधक विद्वान, IIT, मुंबई
2	Migration to open source platform	०२ दिवस	प्रा. वि. ज. कदम	श्री. कृष्णकांत माने, संशोधक विद्वान, IIT, मुंबई

**१६) शैक्षणिक यश/कामगिरी**

१७.१ गेट २०१६ परीक्षा पात्र विद्यार्थी

अ.क्र.	विद्यार्थ्याचे नाव	गुण
१)	कु. अक्षदा दत्तात्रेय साळुंखे	२६.४
२)	कु. ज्ञानेश्वर हनुमंतपप्पा शेटकर	२६
३)	कु. वसीम शेख	३०४/३३०

## १७) विभागाने राबविलेले इतर कार्यक्रमाची रूपरेषा :

१) **औद्योगिक प्रशिक्षण** : माहिती तंत्रज्ञान अभियांत्रिकी शाखेच्या प्रत्येक विद्यार्थ्याने तिसऱ्या वर्षाच्या उन्हाळी सुट्टीत चार आठवड्याचे औद्योगिक प्रशिक्षण पूर्ण करणे आवश्यक आहे. प्रशिक्षणाद्वारे विद्यार्थ्यांना औद्योगिक क्षेत्रात वापरल्या जाणाऱ्या पद्धती व नवीन तंत्रज्ञानाची ओळख होऊन, त्याचा मूळ विषयासंबंधी आवड निर्माण होऊन संशोधन देणारे प्रकल्प शोधण्यास मदत होते.

**समाज उपयोगी तांत्रिक प्रकल्प** : माहिती तंत्रज्ञान शाखेचे विद्यार्थी समाज प्रकल्प बनविण्याचे कार्य करतात. ह्या प्रकल्पाद्वारे त्यांना समाजाच्या वास्तविक जीवनातील समस्यांची जाणीव होते. त्यांना ह्या समस्या सोडविण्याची संधी मिळते. सर्वप्रथम तीन ते चार विद्यार्थ्यांचा समूह विद्यापीठाच्या जवळपास ठिकाणांना भेट देऊन तेथील समाजाच्या समस्यांची चर्चा करतात. चर्चा व निरीक्षणातून त्यांना समस्यांची ओळख होते. विद्यार्थी या समस्यावर विविध उपाय सुचवतात व नमुना प्रतिकृती बनवून त्यांच्या गरजा पूर्ण करण्याचे प्रयत्न करतात.

## १८) विद्यार्थ्यांसाठी राबविलेले इतर उपक्रम :

### १८.१ विद्यापीठ स्तरावरील क्रीडा उपक्रम



### १८.२ तांत्रिक कार्यक्रम :

- १) गुगलर : कार्यक्रम प्रमुख १) प्रशांत नवात्रे २) रुक्क्या कादरी. कार्यक्रमाची रूपरेषा : सर्वात मोठ्या प्रमाणात असलेल्या कार्यक्रमापैकी हा दुसऱ्या क्रमांकाचा तांत्रिक कार्यक्रम आहे. ज्यामध्ये तुमची मर्यादित वेळेमध्ये बौद्धिक क्षमतेसोबत शोधण्याची क्षमता तपासली जाते.
- २) मेझ रनर: कार्यक्रम प्रमुख १) सोमेश आरेवार २) शुभम दिदले. कार्यक्रमाची रूपरेषा : सर्वाधित मोठ्या प्रमाणात सहभाग असलेल्या कार्यक्रमापैकी हा पहिला क्रमांकाचा तांत्रिक कार्यक्रम आहे. ज्यामध्ये तुम्हाला खेळाद्वारे खजिन्याचा शोध लावायचा आहे, हा खेळ खूप आनंद देऊन तुम्हाला रोमांचित करतो.



## १९) उद्योग समूह व शैक्षणिक संस्था संवाद

१९.१ शैक्षणिक संस्थेने केलेला करारनामा : विभागाने "Oracle India Pvt Ltd. WDP" सदस्यत्वासाठी सोबत करारनामावर स्वाक्षरी केली आहे.



## १९.२ विद्यार्थ्यांनी संपादन केलेले विजय व पुरस्कार :

विद्यार्थ्यांचे नाव	पुरस्कार
कु. मानसी रविंद्र गावडे	“३५” राष्ट्रीय Water Polo क्रीडा स्पर्धेत २०१५, रौप्य पदक मिळवले.
	“६९” राष्ट्रीय Water Polo जलतरण २०१५, राजकोट स्पर्धेत रौप्य पदक
	राष्ट्रीय पातळीवरील आंतर-अभियांत्रिकी पोहणे क्रीडा स्पर्धा SUMMIT 15, MIT पुणे येथे झालेल्या स्पर्धेत २ सुवर्ण व १ रौप्य पदक मिळवले.
	राष्ट्रीय पातळीवरील आंतर-अभियांत्रिकी पोहणे क्रीडा स्पर्धा, ZEST 16 सरकारी अभियांत्रिकी महाविद्यालय, पुणे येथे झालेल्या स्पर्धेत ७ सुवर्ण पदक मिळवले.
	बॉटर पोलोमध्ये राष्ट्रीय आणि आंतरराष्ट्रीय स्तरावर झालेल्या स्पर्धेत यशसंपादनमुळे रायगड भूषण पुरस्कार
	‘राष्ट्रीय पातळीवरील आंतर-अभियांत्रिकी क्रीडा स्पर्धा शिल्ड, ZEST 16’ सरकारी अभियांत्रिकी महाविद्यालय, पुणे येथे झालेल्या स्पर्धेत सर्वोत्तम जलतरणपटू पुरस्कार प्रदान.

## १९.३ अध्यापक यश :

- डॉ. शि. मा. जाधव, सहकारी प्राध्यापक, संशोधन अभ्यासक्र यशस्वीरित्या पूर्ण केला.
- प्रा. अरुण रा. बाभूलगावकर, QIP अंतर्गत संशोधन अभ्यासक्रमासाठी वालचंद अभियांत्रिकी महाविद्यालय, सांगली येथे निवडलेले गेले आहेत.
- श्रीमती सोनाली वासुदेवराव भरड, श्रीमती सपना शिवाजी बर्फे आणि श्रीमती साधना रानोजीराव हिवरे, सहाय्यक प्राध्यापक, यानी पदव्युत्तर अभियांत्रिकी अभ्यासक्र यशस्वीरित्या पूर्ण केला.

## २०. Fraternity of Information Technology (विभागातील विद्यार्थी संघटना)

अ.क्र.	विद्यार्थ्यांचे नाव	पद	जबाबदारी
१)	प्रतीक पाटील	अध्यक्ष	विद्यार्थ्यांच्या वार्षिक कार्यक्रमाचे नियोजन, नियंत्रण आणि अंमलबजावणी
	अनिल रिक्षे		
२)	लवीन द्विवेदी	सांस्कृतिक कार्यक्रम	विद्यार्थ्यांच्या सांस्कृतिक कार्यक्रमाचे समन्वय आणि नियोजन
	दर्शन नेरकर		
३)	अक्षय महाडिक	क्रीडा उपक्रम	विद्यार्थ्यांच्या क्रीडा उपक्रमाचे समन्वय आणि नियोजन
	मानसी गावडे		
४)	संकेत येलकर	तांत्रिक कार्यक्रम	विद्यार्थ्यांच्या तांत्रिक कार्यक्रमाचे समन्वय आणि नियोजन
	अमोल दाइत		
५)	चैतन्य खाचवणे	सामाजिक कार्यक्रम	सामाजिक कार्यक्रमाचे समन्वय आणि नियोजन
	रजनीश नलावडे		
६)	मंदार साखरकर,	साहित्यिक कार्यक्रम	सामाजिक कार्यक्रमाचे समन्वय आणि नियोजन
	विनायक सानप		
७)	आदित्य खानदाते	कार्यक्रम व्यवस्थापक	विविध कार्यक्रमाचे व्यवस्थापन

## २१. विभागाचे असाधारण व प्रतिष्ठित माजी विद्यार्थी :



स्वप्नील दाभाडे

स्वप्नील दाभाडे ह्या माजी विद्यार्थ्यांनी संगणक अभियांत्रिकी शिक्षण पूर्ण करून "Horizon Techonlogies - a digital agency" हा स्वतंत्र व्यवसाय ठाणे येथे सुरु केला. त्याच्या उद्योगाने तीन वर्षात १५० ग्राहकांना सेवा पुरविण्याची लक्षणीय व प्रभावी कामगिरी केली आहे. आज त्याच्या उद्योगाने सर्वात गतिमानशिल्तेने विस्तार होणारा 'Digital Agency' व्यवसाय म्हणून नाव कमवले आहे. त्याचे व्यवसायावर अतिशय प्रेम असून तो सामाजिक क्षेत्रातील व्यवसाय माध्यम विशारद व नवीन उद्योगधर्दे स्थापना करण्यासाठीचे सळ्ळे देऊन प्रोत्साहन देतो.

- देवेंद्र चौधरी – भारतीय हवाईदलात वैमानिक अभियंता म्हणून कार्यरत आहे.
- आदित्य ओगले – "Parshuram Techonlogy" स्वतंत्र व्यवसायाचा संस्थापक.
- आनंद वाठोरे – सहकारी माहिती तंत्रज्ञान सल्लागार (आयटीसी)

## २२) विभागीय बलस्थाने, उणीवा, संधी आणि आव्हाने :

### विभागी बलस्थाने

- १) तरुण व अनुभवी अध्यापक कर्मचारी
- २) कर्तव्यनिष्ठ शिक्षक व शिक्षकेतर कर्मचारी वर्ग
- ३) विद्यापीठ परिसरात नेटवर्किंग

### विभागाच्या कमतरता :

- १) अपुरी पायाभूत सुविधा
- २) संशोधक शिक्षकीय कर्मचारी कमतरता/तुटवडा
- ३) अध्यापकीय रिक्त पदे
- ४) वरिष्ठ अध्यापकीय रिक्त पदे

### संधी :

- १) पदव्युत्तर अभ्यासक्रम सुरु करणे.
- २) कौशल्य प्रदान करण्याच्या शाळा सुरु करणे.
- ३) विभागीय ग्रंथालय सुरु करणे.
- ४) नवीन तंत्रज्ञान जागरूकता प्रशिक्षण देणे.
- ५) सल्ला केंद्र सुरु करणे सायबर गुन्हे शोध
- ६) शिक्षकीय कर्मचाऱ्यांना उच्च शिक्षणासाठी नावनोंदणी करवणे.

### आव्हाने :

- १) औद्योगिक क्षेत्रातील गरजांप्रमाणे अभ्यासक्रम विकसित करणे. गतिमानशील माहिती तंत्रज्ञान शाखेतील नवनवीन बदलांशी जुळवून करणे.
- २) शिक्षकीय कर्मचाऱ्यांना प्रशिक्षण देणे.
- ३) संशोधन सुविधा पुरविणे.

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## यंत्र अभियांत्रिकी विभाग



डॉ. पी. के. ब्राह्मणकर  
प्राध्यापक व विभागप्रमुख

### विभागप्रमुखांचा संदेश

“भविष्य त्यांच्यासाठी आहे जे आजपासून तयारी करतात”

यंत्र अभियांत्रिकी विभागाचा २०१५-१६ वर्षाचा वार्षिक अहवाल सादर करताना मला अत्यंत आनंद होत आहे. विभाग वर्षानुवर्षे शैक्षणिक आणि अभ्यासानुवर्ती उपक्रमामध्ये सातत्याने प्रगती करत असल्याचा अभिमान आहे. उद्योग आणि व्यवसायाच्या गरजेनुसार विभागामध्ये नियमित व योग्य असे (परिपूर्ण) शिक्षण दिले जाते.

विद्यार्थ्यांचा वैयक्तिक विकास हे ह्या शिक्षण पद्धतीचे उद्दिष्ट असून आयुष्यातील पुढील आव्हाने स्वीकारण्यासाठी कोणताही विद्यार्थी सुसज्ज झाल्याशिवाय राहणार नाही. विभागामध्ये अद्यावत प्रयोगशाळा आणि हितावह वातावरण विद्यार्थ्यांना शिक्षणाकरिता व त्यांच्या विकासाकरिता मदत करते. विभागामार्फत विद्यार्थ्यांना विविध प्रयोग, आराखडा काम, प्रकल्प काम, औद्योगिक प्रशिक्षण, व्यावसायिक समाज कार्य आणि एकसंघता या सर्वांमध्ये भाग घेण्यासाठी संधी उपलब्ध करून देण्यात येते. विभागातील सर्व प्राध्यापक अर्थपूर्ण व नाविन्यपूर्ण संशोधनामध्ये अग्रेसर असून त्यामध्ये फक्त Ph.D./M-Tech चे विद्यार्थीच नव्हे तर B-Tech विद्यार्थ्यांचा सुद्धा सहभाग करून घेतात.

विभागाचे मुख्य उद्दिष्ट असे आहे की, विद्यार्थ्यांनी त्यांचे पायाभूत व प्रगत अभियांत्रिकी ज्ञान व कौशल्य करावेत. सध्याच्या जगात संपूर्ण यशस्वी होण्यासाठी प्रयत्न करावेत. आम्ही त्यांना चांगले शिक्षणच नव्हे तर नवनवीन कल्पना व अभ्यासक्रमांमध्ये त्यांची रुची निर्माण करतो.

विभागाचा सर्वांकष दृष्टिकोन विद्यार्थ्यांमध्ये विविध दृष्टिकोनातून नवनवीन कल्पना, विचार, सबल विश्वास याद्वारे यश मिळवण्यासाठी त्यांना प्रोत्साहन देणे. उपरोक्त संदेशामार्फत मी शिक्षक व शिक्षकेतर तसेच विद्यार्थ्यांना आपल्या विभागाला उत्कृष्ट विभाग म्हणून कार्यरत ठेवण्यासाठी मनापासून मदत व प्रोत्साहन दिल्याबद्दल धन्यवाद देतो. तसेच विद्यार्थ्यांनी स्विकारलेल्या यंत्र अभियांत्रिकीच्या यशावर यशस्वी होण्यासाठी शुभेच्छा देतो.

डॉ. पी. के. ब्राह्मणकर,

### ध्येय :

विभागातील दृष्टिकोन आणि उद्देशाचे निवेदन, शिक्षणाची गुणवत्ता वाढविणे, विद्यार्थ्यांचा सर्वांगिण विकास गरजेनुसार पायाभूत सुविधा आणि विस्तार याकडे लक्ष.

### दृष्टिकोन :

विभागाचा दृष्टिकोन हा अध्यापनामध्ये उत्कृष्टता मिळवणे, शिकणे, शोध घेणे, विद्यार्थ्यांचा सर्वांगिण विकास आणि तंत्रज्ञानाचे बदलीकरण इ. आहे.

### विभागा विषयी :

स्थापना : १९९२

- i) B-Tech यंत्र अभियांत्रिकी
- ii) M – Tech Thermal Engineering
- iii) M – Tech Manufacturing Engineering
- iv) Ph.D

विभागांना उच्चशिक्षित अध्यापकांचा अभिमान आहे. ज्यांनी भारतीय प्रौद्योगिक संस्थेमधून (IIT) Ph.D. पूर्ण केली आहे. विभागाच्या माजी विद्यार्थ्यांनी उद्योग आणि व्यवसायामध्ये स्वतःचे अस्तित्व निर्माण केले आहे. अनेक वर्षांपासून विद्यार्थीठाने चांगली शैक्षणिक आणि संशोधन संस्कृती जपली आहे. त्यामुळेच विभागातील शिक्षकांनी ६०० पेक्षा अधिक आंतरराष्ट्रीय नियतकालीके प्रकाशित केली असून दुरवरच्या परिषदांमध्ये सहभाग नोंदवला आहे. तसेच प्रयोगशाळांमधून नाविन्यपूर्ण उत्पादने निर्माण करून त्याला व्यावसायिक उद्योगात पेटंट मिळाले आहे. हा विभागाचा भारतीय प्रौद्योगिक संस्था, मुंबई व बी.ए.आर.सी. या संस्थांशी चांगला ताळमेळ आहे. याचबरोबर विभागाने अध्यापक व शिक्षकेतर कर्मचारी यांच्या फायद्यासाठी वेगवेगळे शैक्षणिक उपक्रम आयोजित केले आहेत.

### शैक्षणिक उपक्रमाची उद्दिष्ट (PEOs)

अभियांत्रिकी संबंधीचे प्रश्न सोडवण्यासाठी विद्यार्थ्यांच्या शास्त्रसंबंधाचा पाया मजबूत करण्याबरोबर अभियांत्रिकीच्या मुलभूत गरजांचा पुरवठा करणे.

व्यावसायिक आणि नैतिक दृष्टीकोन, सुसंगत संवाद कौशल्ये, नेतृत्व कौशल्ये, एकसंघता कौशल्य, शिस्तबद्ध दृष्टिकोन आणि अभियांत्रिकी विषयीच्या समस्या, सामाजिक आणि आर्थिकदृष्ट्या सोडवण्याची क्षमता विकसित करणे.

विद्यार्थ्यांना उपयुक्त असे विद्यार्थीठातील वातावरण त्यांच्या गुणवत्तेची जाणीव आणि त्यांच्या यशस्वी कारकिर्दीसाठी त्यांना सातत्याने प्रोत्साहन देणे.

### ५. उपक्रमाची निष्पत्ती

- ❖ पदवीधारकांना Diff of vector, calcules, complex, variable matrix theory, probability theory, physics chemistry आणि यंत्र विभागाचे ज्ञान अवगत असेल.
- ❖ पदवीधारक सुत्र आलेख आणि यंत्र अभियांत्रिकीतील समस्या सोडवण्याची क्षमता सिद्ध करतील.
- ❖ पदवीधारकांना यंत्राचे घटक तसेच माहितीची विश्लेषण आणि स्पष्टीकरण यांचा आराखडा तयार करण्याची क्षमता असेल.
- ❖ पदवीधारकांना यंत्र अभियांत्रिकीतील प्रगत आणि उद्योन्मुख विषयांचे ज्ञान अवगत असेल.
- ❖ पदवीधारक आधुनिक साधने, वास्तवातील अडचणी सोडवण्यासाठी व त्यांचे विश्लेषण करण्यासाठी software आणि उपकरणे यांचा वापर करण्याची कौशल्ये सिद्ध करतील.
- ❖ पदवीधारकांना अभियांत्रिकी विषयाच्या कल्पना देवाण-घेवाण करण्यासाठी संवाद कौशल्य अवगत असेल. या कौशल्यामध्ये शाब्दिक, लिखित आणि श्रवणाचे कौशल्य अवगत असेल.
- ❖ पदवीधारक विविध गटांमध्ये एकत्रपणे काम करण्याची व जुळवून घेण्याची क्षमता सिद्ध करतील.
- ❖ तसेच पदवीधारक आत्मविश्वास आणि आयुष्यभर शिकण्याची क्षमता विकसित करतील.

### ६) शैक्षणिक उपक्रमाचा आढावा

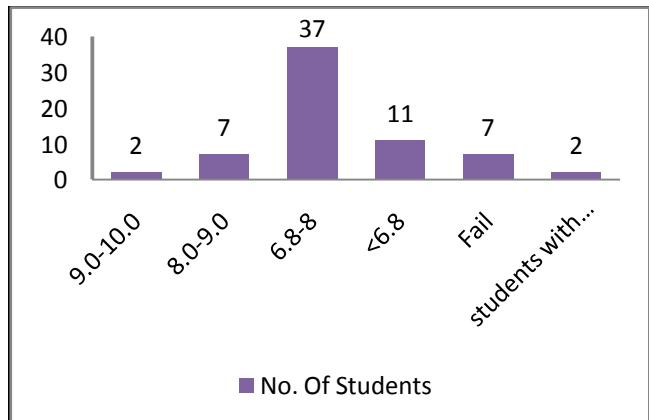
शैक्षणिक उपक्रम	उपक्रमाची विशेषज्ञता	कालावधी	प्रवेशक्षमता
पदवीधारक			
बी.टेक	यंत्र अभियांत्रिकी	४ वर्षे	६०
पदव्युत्तर पदवीधारक			
एम.टेक	Thermal & Fluids Engineering	२ वर्षे	१८
एम.टेक	Manufacturing Engineering	२ वर्षे	१८
पीएच.डी			
पीएच.डी	यंत्र अभियांत्रिकी	३३	पीएच.डी

#### ६.१ UG Students Statistical Information

अ. क्र.	वर्ष	Open			SC			ST			OBC			VJNT			SBC			Total		
		पु.	स्त्रि	ए.	पु.	स्त्रि	ए.	पु.	स्त्रि	ए.	पु.	स्त्रि	ए.	पु.	स्त्रि	ए.	पु.	स्त्रि	ए.	पु.	स्त्रि	ए.
1.	प्रथम	20	6	26	4	2	6	3	1	4	14	2	16	3	2	5	3	2	5	47	15	62
2.	द्वितीय	22	4	26	7	3	10	5	1	6	22	10	32	6	1	7	0	0	0	62	19	81
3.	तृतीय	26	9	35	5	2	7	3	0	3	11	6	17	4	2	6	3	0	3	52	19	71
4.	चतुर्थ	22	10	32	5	1	6	4	1	5	11	4	15	4	3	7	1	0	1	47	19	66

#### ६.२ निकाल विश्लेषण

B.Tech. Pass Out Data(CGPA) 2015-16	
Pointer	No. of Students
9.0-10.0	2
8.0-9.0	7
6.8-8	37
<6.8	11
Fail	7
Students with SGPA	2
<b>Total</b>	<b>66</b>



Result Analysis of B. Tech. Final Year Mechanical Engg. (2015-16)

#### ६.३ Campus Placements

Following students from the department have got campus placement during academic year 2015-16.

Sr. No.	Roll No.	Name	Company
1	20120146	Manoj Patil	MaxVal Technologies pvt.ltd. Mumbai
2	20120115	Pooja Gole	Galaxy Roofing India pvt. Ltd. Pune
3	20120135	Vaibhav Leharkar	Galaxy Roofing India pvt. Ltd. Pune
4	20120115	Atmaram V Gaware	Galaxy Roofing India pvt. Ltd. Pune
5	20120121	Shraddha Imandar	Kiroshkar Chillers
6	20120114	Mayur Gharat	Vighneshwari, Mumbai
7	20120136	Jagruti Mahamunkar	SARA HVAC
8	20120110	Lahu Dhigole	Vighneshwari, Mumbai
9	20120133	Ashwin Kolte	Vighneshwari, Mumbai
10	20130178	Vishal Potdar	Sudarshan Chemicals Ltd., Roha

#### ७. विभागीय सळगांव समिती

- 1. Professor S.K. Maiti (IIT Bombay)
- 2. Professor J.B. Doshi (IIT Bombay)
- 3. Professor A.W. Date (IIT Bombay)
- 4. Shri. R. Balaji (ONGC Mumbai)

5. Shri. Sanjay Chopane (Eaton India  
Engineering Centre, Pune)

**७.१ Board of Studies (BoS as per Dr. BATU Act)**

6. Shri. Devidas D. Pawar (Bajaj Auto Ltd., Pune)  
7. Shri. Ashok Agarwal (JSW Dolvi, Pen)

Section	Provision	Name of the Person
31(1)(a)	The Head of the University School of studies concerned	Not Applicable at present
31(1)(b)	The Head of the Department (ex-officio)	Dr. P.K. Brahmankar
31(1)(c)	One person who has specialized knowledge of the subject nominated by the Vice-Chancellor	Dr. M.S. Kale
31(1)(d)	Two technologists, to be co-opted by the Board from amongst the teachers who are not the Heads of the Departments	Dr. M.S. Tandale Dr. V.G. Sargade

**८. Faculty and Staff Information**



**डॉ. पी. के. ब्राह्मणकर**

Professor and Head of Department  
B.E. (Mechanical Engg.)  
M.Tech (Production Engg.)  
Ph.D. (Mechanical Engg.)



**डॉ. एम्. एम्. तंदळे**

Associate Professor  
B.E. (Mechanical Engg.)  
M.Tech. (Mechanical Engg.)  
Ph.D. (Mechanical Engg.)



**डॉ. व्ही. जी. सरगडे**

Professor  
B. Tech. (Mechanical Engg.)  
M. Tech. (Mechanical Engg.)  
Ph. D. (Mechanical Engg.)



**डॉ. एम्. सर्दैय्या**

Associate Professor  
B.Tech (Mechanical Engg.)  
M.E. (Production Engg.)  
Ph.D. (Manufacturing Engg.)



**डॉ. आर. पी. काटे**

Associate Professor  
B. E. (Mechanical Engg.)  
M. Tech. (Energy Systems Engg.)  
Ph.D. (Mechanical Engg.)



**डॉ. नीरज अग्रवाल**

Associate Professor  
B. E. (Mechanical Engg.)  
M. Tech. (Ref. & AC, Mechanical Engg.)  
Ph.D. (Mechanical Engg.)



**डॉ. आर. एस्. पावडे**

Associate Professor  
B. E. (Mechanical Engg.)  
M. E. (Machine Tool Engg.)  
Ph.D. (Mechanical Engg.)



**डॉ. एच. एन. वळाटकर**

Associate Professor  
B. E. (Mechanical Engg.)  
M. Tech. (Mechanical Engg.)  
Ph. D. (Mechanical Engg.)



**डॉ. एस्. एस्. नाईक**

Associate Professor  
B. E. (Mechanical Engg.)  
M. Tech. (Mechanical Engg.)  
Ph. D. (Mechanical Engg.)



**डॉ. बी. एफ्. जोगी**

Associate Professor  
B.E. (Mechanical Engg.)  
M. Tech. (Manufacturing Technology)  
Ph.D. (Nano Materials)

**डॉ. एच. एस. जोशी**

Assistant Professor  
B.E. Production Engg.  
M.E. Mechanical-CAD/CAM  
Ph.D. Mechanical Engg.

**प्रा. जी. एम. वररखडे**

Assistant Professor  
B.Tech. (Mechanical Engg.)  
M.Tech. (Thermal and Fluids Engg.)  
Ph. D. ongoing (Mechanical Engg.)

**प्रा. डी. बी. वाईमारे**

Assistant Professor  
B. E. (Mechanical Engg.)  
M. E. (Mechanical - Production Engg.)  
Ph. D. Ongoing (Mechanical Engg.)

**प्रा. एस. आर. ढाले**

Assistant Professor  
B. E. (Mechanical Engg.)  
M. E. (Design Engg.)  
Ph.D. Ongoing (Manufacturing Engg.)

**श्रीमती रुपाली शेठ**

Assistant Professor  
M. Tech (Manufacturing Engg.)  
Contract faculty

**श्री. आकाश आवले**

Assistant Professor  
M. Tech (Production Engg.)  
Contract faculty

**Technical Supporting Staff****श्री. अमृत चौधरी**

Lab Technician  
SSC, NCTVT (Chemical), B.A.  
Experience: 26 years.  
In dept.: 8 years

**श्री. एस. जी. लाड**

Lab Technician  
B.Sc. (Chemistry)  
Experience: 23 years.  
In dept.: 8 years

**सौ. मनिषा सकटे**

Lab Assistant  
B.Sc.  
Experience: 7.6 years  
In dept.: 1.5 years

**९. पीएच.डी. अभ्यासक्रमाचे विद्यार्थी**

Sr.No	Name of Research Scholar	Registration Number	Title of Ph.D. Thesis
1	Saraf Atul R.	RS20120114	Some Studies on the Effect of Process Parameters on Photochemical Machining of SS316L.
2	Kadam Ganesh S.	RS20120111	Investigations on surface integrity in High-speed machining of Inconel 718 under different machining environments.
3	Patil Deepakkumar H.	RS20120113	Photochemical Machining of Monel.
4	Chavan Ajay A.	RS20120109	Hard Turning using Coated Carbide Tools.
5	Nipanikar Suresh R.	RS20120112	Machinability Studies of Ti6Al4VELI in Dry and Minimum Quantity Lubrication (MQL) Environment.
6	Malvade Niket V.	RS20140112	Surface Integrity Analysis and Modelling in Machining of Biomedical Magnesium alloy.

7	Shinde Babasaheb D.	RS20140113	Machinability Assessment of Low Electrical Conductivity Ceramics by using WEDM.
8	Khadtare Avinash N.	RS20140108	Experimental Investigation and Modelling in Microdrilling of TBC Inconel 718 superalloy.
9	Thorat Shrikant B.	RS20140115	Some Investigations in Photochemical Machining of Cobalt Chromium Alloy.
10	Kadam Shirish V.	RS20140117	Some Investigations on Machinability of SAF2205 and SAF2507 Duplex Steel in End Milling.
11	Madavi Kishor R.	RS20140110	Optimization of Welding process parameters.
12	Lohar Ganesh S.	RS20140109	Structure Property Relationship Studies on Polymer Nano-Composite.
13	Jadhav Vijay D.	RS20140107	Some Studies on Reverse Electric Discharge Machining of Low Aspect Ratio Surface Area Structures.
14	Mahajan Kuldeep A.	RS20140111	Some Studies on Effect of Vibrations on Diamond Turning Performance.
15	Sonawane Gaurav D.	RS20140114	Machinability Studies of Difficult to Cut Materials Using Coated Tools with Advanced Coating Materials & Techniques.
16	Bhanavase Vishavjit L.	RS20140106	Study Of Tribological Behaviour Of Polymer Composite.
17	Nirantar Shripad R.	RS20150103	Preparation and Characterization of Polymer Based Nano Composite.
18	Varier Ranjith S.	RS20150104	Study of Machining Behaviour of Polymer Based Composite.
19	Bhise Vishal Y.	RS20150101	Sustainable Manufacturing: An Eco-Intelligent Design of Product System
20	Dhurde Ganesh P.	RS20150102	Some Studies on Surface Integrity of Component Produced by Electro-Discharge Machining
21	Misal Nitin D.	RS20090101	Some Investigation Into Photochemical Machining of Inconel Alloy
22	Pandey Akash B.	RS20090102	Some Investigation into Electrical Discharge Machining of Titanium Diboride Reinforced Steel Matrix Composites
23	Jagtap Ketan A	RS20120104	Investigation on Machined Surface Integrity in CNC Turning of Biocompatible Co-Cr-Mo Alloy
24	Patil Omprakash S.	RS20120117	Transcritical CO <sub>2</sub> Heat Pump System: Cycle Modification and Optimization
25	Jadhav Pravin L.	RS20120115	CO <sub>2</sub> Transcritical System: Studies on Capillary Tube
26	Jadhav Sangram D.	RS20120116	Investigation on Suitability of Alternative Fuel Obtained from Regional Feedstock for CI Engine
27	Vinod C Todkari	RS20120118	Investigations on Various Types of Hydraulic Jump
28	Vishwas V. Palwe	RS20140116	Some Investigation of Heat Pipe Heat Exchanger Assisted Air Conditioning System
29	Gujar R.A.	RS20140101	Some Investigations in Biomechanical Properties Of Lower Extremity Bones
30	Pansare S. R.	RS20140102	Some Studies on Effect of Crack In Beam/Shaft
31	Patil S.R.	RS20140104	Some Studies on Investigation into Torsional Vibration Control using Smart Dynamic Damper
32	Wargante, S.R.	RS20140105	Some Studies in Dynamic Analysis of Bones
33	Kadhane Somnath Hanumant	RS20120106	Some Investigation into Mechanical Behaviour of Soft Biological Tissues

## १०. विभागातील उपक्रम व त्यांचे समन्वयक

S.N.	Faculty	ACTIVITIES/PORTFOLIOS
1	Dr. P.K. Brahmankar	Budget/Finance/Resource Mobilization
2	Dr. M.S. Tandale	Procurement of books/learning resources, library matters, space management
3	Dr. V.G. Sargade	No activity given due to additional charge of the post of Registrar.

4	Dr. M. Sadaiah	RC meetings/Ph.D. matters/R&D projects/ISO activity
5	Dr. R.P. Kate	Students Counseling / Teacher Guardian Scheme / Career Guidance to students
6	Dr. R.S. Pawade	Stake-holders' Feedback / Academic Audit
7	Dr. N. Agrawal	T&P / I-I-I / Dept Brochures / Web-site
8	Dr. H.N. Warhatkar	BTP/BTS/SSS/TPCS/Electives
9	Dr. S.S. Naik	Dept Meetings / Exam Section related matters / Remedial Coaching
10	Dr. B.F. Jogi	Coordination of NBA/NAAC activity / Admission activity
11	Dr. H.S. Joshi	Dept. Information, MIS, Cynosure, Avishkar, Techfests, MESA, Alumni affairs
12	Prof. S.R. Dhale	HR Activities/ Workload Distribution / TAs / Industrial Training of Students / Industrial Visits/Dept. Time-Table

## ११. Additional Responsibilities to the Faculty

Dr. P.K. Brahmankar

- Head, Mechanical Engineering Department
- Coordinator TEQIP-II

Dr. M.S. Tandale

- Coordinator QEEE

Dr. V.G. Sargade

- In-charge Registrar of the University

Dr. M. Sadaiah

- Associate Coordinator, TEQIP-II

Dr. R.P. Kate

- Coordinator, Abiyanta Vasant (Annual Social (Annual Social Gathering)

Dr. N. Agarwal

- Training and Placement Officer
- Coordinator, Industry-Institute Interaction Cell,

TEQIP-II

- Faculty Advisor, M.Tech Program in Thermal and Fluids Engineering
- Faculty Advisor, ISHRAE Chapter

Dr. H. N. Warhatkar

- NSS Coordinator

Dr. S.S. Naik

- Coordinator, University Annual Report Committee
- Director, IQAC

Prof. S. R. Dhale

- Rector, Sahyagiri Hostel

Dr. R. S. Pawade

- Coordinator- UGC Cell
- TEQIP II Procurement Coordinator
- Workshop Superintendent
- Faculty Advisor, M.Tech Program in Manufacturing Engineering
- Faculty Advisor- SAE Collegiate Club, Dr. BATU
- Member, Staff Promotion Development Scheme for Non-Teaching Staff
- In-charge for University Examination Seating arrangement
- In-charge for University Minibus
- In-charge for University Security

Dr. B.F. Jogi

- Rector, Sahyagiri Hostel

Dr. H.S. Joshi

- Coordinator, University Timetable Committee
- Coordinator, University online Attendance system
- Coordinator, Technical Event Committee
- Chairman, University Alumni Cell

Ms. Rupali Sheth

Mr. Aakash Awale

- QEEE class coordination (department level)

## १२. प्रकाशने (२०१५-१६)

### १२.१ प्रकाशित शोधनिबंध

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### १३. प्रयोगशाला

Sr. No.	Name of the Lab
1	Refrigeration and Air Conditioning Lab
2	Fluid Mechanics and Fluid Machinery Lab
3	Heat Transfer Lab
4	Renewable Energy Lab
5	I.C. Engine / Thermal Engineering Lab
6	Material Science / Engineering Metallurgy Lab
7	Material Testing Lab (SOM)

8	Photochemical Machining Lab (PCM)
9	Theory of Machines and Machine Dynamics Lab/ Engineering Mechanics Lab
10	Machine Design Lab
11	Metrology and Quality Control Lab
12	CAD / CAM Lab
13	Robotics and Mechatronics Lab
14	Center for Advanced Machining Technology (CAMT)

### १३.१ प्रयोगशालेतील उपकरणे

Sr.No.	Name of Equipment/Instrument	Qty.
1	Photoresist Coating Machine	1
2	MIG Welding Machine	1
3	ABACUS Software	1
4	Sample Hot Mounting Press	1
5	Steam Generation Device	1
6	Deep Freezer	1
7	Ultrasonic Cleaner	1
8	High Resolution PCM Printer	1
9	Pro- V- Building Anergy Software	1
10	ANSYS CFD Package	1
11	MISTRAS Software	1
17	Workstations	3
18	Sample Polishing Machine	1
19	SAW Welding Machine	1
20	Biodiesel Production Setup	1
21	Baking Oven / Furnace	1
22	Ni Data Acquisition Systems	1
23	High Speed Camera	1
24	CAM Software With Workstation	1
25	Digital Storage Oscilloscope	1
26	Constant Temperature Bath	1
27	CATIA Software	1

### १४. आयोजित केलेल्या कार्यशाळा / परिसंवाद / प्रशिक्षण शिविरे

Sr. No.	Name of the course/Workshop/Conference	Duration	Name of coordinators	Eminent Speakers
1	Developments in Welding Technology	March 8-12, 2016	Dr. R.S. Pawade Dr. B.F. Jogi	Dr. Narendra Joshi Mr. Mangesh Patil
2	Robotisation in Automotive Industries	April 9, 2016	Dr. R. S. Pawade	Dr. S. S. Ohol, COE Pune

3	Advances in Precision Manufacturing	December 5, 2015	Dr. R. S. Pawade	Dr. Ramgopal V. Sarepaka, Sr. Vice President, Optics MechVac India Ltd.
4	Industrial Meet	March 19, 2016	All Faculty members	Three industry representatives and faculty were present
5	World Summit on Accreditation (WOSA2016) on "Quality Assurance through Outcome Based Accreditation"	March 18 to 20, 2016	Dr. N. Agrawal	Gurgaon, Delhi NCR
6	Day Workshop on Outcome Based Education jointly organized by BMS College of Engineering and IUCEE and Inpods	Jan. 09 -10, 2016.	Dr. N. Agrawal	D.Y. Patil Institute of Engineering and Technology, Pimpri, Pune
7	Short Term Course on Condition Monitoring of Rotating Machine Elements at IIT, Indore on "Piping Engineering"	May 11-15, 2015	Dr. N. Agrawal	S.P. College of Engineering, Andheri, Mumbai

#### १५. Industrial/Field Visits during 2015-2016

Sr. No.	Name of Industry/Organization	Date
1	Volkswagen Private Ltd.+ Chakan Science Center, Pune	18 <sup>th</sup> April 2015
2	JSW, Salav	22 <sup>nd</sup> April 2015
3	Nucluear Power Plant, Tarapur	22 <sup>nd</sup> April 2015
4	Techfest, IIT Bombay	26 <sup>th</sup> December 2015
5	Kisan Vir Sugar Factory, Satara (ISHRAC)	12 <sup>th</sup> February 2016
6.	Gharda Chemicals Ltd., Lote, Dist-Ratnagiri	10 <sup>th</sup> April 2016

#### १६. विद्यार्थ्यांचे यश

GATE 2016 Scores

Sr. No.	Name	Gate Marks
1	Akshay Joshi	49.35
2	Mayuresh Kange	38.79
3	Shivprasad Mawal	35.67
4	Aniket Gunjal	34.96
5	Manoj Patil	28.00
6	Vishal Wankhede	28.00

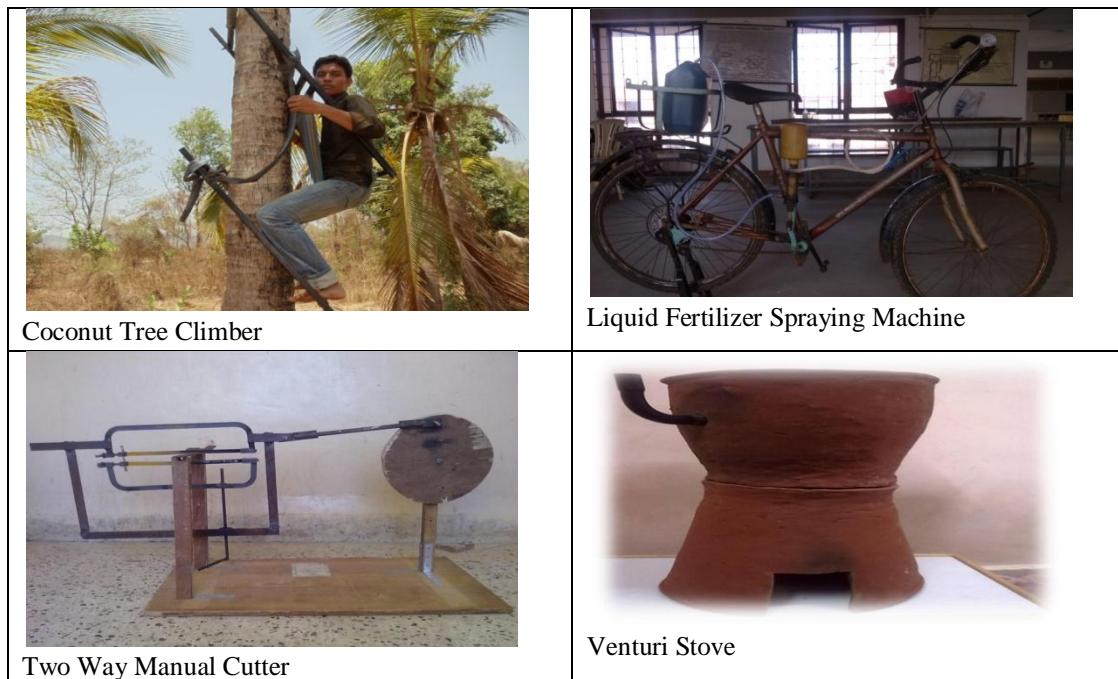
#### १७. Conferences/Workshops/Trainings/Academic Awareness activities conducted under TEQIP-II

M. Tech and Ph.D. Students

Sr. No.	Name of the course	Venue of the course	Duration	Name of attendee
1.	RESCON	IIT, Bombay	14-15 March 2015	Avinash Khadtare
2.	Latex	IIT, Bombay	29 August 2015	Avinash Khadtare
3.	MAM 2015	VNIT, Nagpur	4-5 Dec 2015	Avinash Khadtare, Vishwanath Chavan, Suyog Gadhari.
4.	COPEN-9	IIT, Bombay	9 Dec, 2015	Avinash Khadtare
5.	Welding Technology DBATU, Lonere.	DBATU,Lonere	8-12 March, 2016	Avinash Khadtare, Rinul

6.	Optimization Techniques, IIT/DBATU	IIT Bombay, DBATU, Lonere	2- 7 Nov, 2015	Avinash Khadtare
7.	CEP Programme on 3D Printing (w/s)	IIT, Bombay	11-13 April, 2016	Amit Dalvi
8.	Materials Microstructure Characterization	IIT, Hyderabad	20-24 Dec, 2015	Vishwanath Chavan
9.	International Conference on Nanostructural Polymeric Materials and Polymer Composites.	Mahatma Gandhi University, Kottayam, Kerala.	13-15 November, 2015	Rinul Dhajekar
10.	International Conference on Civil, Mechanical and Environmental Technology.	SVS College of Engineering, Coimbatore.	26-27 February, 2016	Rinul Dhajekar

#### १८. Technical Project on Community Services (TPCS)



#### १९. MESA कार्यकारी समिति

President: Mayuresh Kange Secretary: Rohit Ghode

Treasurer: Mayuresh Kambdi Sport Secretary: Krishna Rautwar

Faculty Advisor: Dr. H. S. Joshi



Teachers' Day Celebration under MESA Debate Competition under MESA



Organizing team of X'celerate (Cynosure 2k16) Beginning of a race in Cynosure 2k16



Students enjoying the thrill of X'celerate

All terrain vehicle made by students of SAE Collegiate Club for SAE BAJA Competition



Students participating in SAE BAJA 2016 Team members and Faculty Advisor Dr. R.S. Pawade who participated in SAE BAJA Competition

## २०. SAE कार्यकारी समिती

President: Ashwin Kolte

Vice President: Monica Chavan

Treasurer: Karansigh Rajput

Secretary: Chaitali Sawant

Programme Chair: Sayli Patil

Publicity Chair: Mithilesh Rane

Reception: Omkar Jadhav

Student Membership: Govinda Amrutkar

Faculty Advisors: Dr. R. S. Pawade & Dr. H. N. Warhatkar



Students working hard to make the All-terrain vehicle for 'SAE BAJA Competition'

Launching Ceremony of vehicle made by 'SAE BAJA team of students'

## 21. ISHRAE कार्यकारी समिति

President: Shirole Ranjeet Vilas  
Secretary: Chavan Mandar Prakash  
Treasurer: Mhamunkar Jagruti Chandrakant  
Faculty Advisor: Dr. Neeraj Agarwal

## 22. SWOT Analysis of the Department

### Strengths

- ❖ Highly qualified, committed and stable faculty
- ❖ Strong linkages with IIT-B, BARC and ICT Mumbai
- ❖ Liberal faculty development policy and attitude
- ❖ Residential campus
- ❖ UGC grants under 12(B)
- ❖ Good research culture & work culture
- ❖ Autonomy & academic freedom

### Weaknesses

- ❖ No grant for M. Tech. programs: No faculty positions for M. Tech. programs
- ❖ Locational disadvantages:
  - Non-availability of mechanical engineering industry in the vicinity
  - Placement
  - Attracting visiting faculty
- ❖ Infrastructure: Lab space on the ground floor

### Opportunities

- ❖ Demand for researchers and innovators due to knowledge-driven economies:
  - Enhancing M. Tech. programs particularly in inter-disciplinary areas, starting dual degree programs
  - Enhancing Ph.D. programs
  - To become a QIP Centre for M. Tech. & Ph.D. programs
- ❖ Enhancing sponsored research, consultancy, CEPs for academia and industry
- ❖ Technical services to rural community by developing appropriate technologies
- ❖ Public-private partnerships

### Challenges

- ❖ Retention of faculty
- ❖ Attracting talented students
- ❖ Competition from foreign universities and private universities
- ❖ Competition from countries like China, Philippines, etc

## 23. विभागाचा पंचवार्षिक विकास आगाखडा (२०१६-२०२१)

### **Expansion of Academic Activities:**

- Academic programs to be added:
  - M.Tech. in Design Engineering
  - M.Tech. in CAD/CAM in collaboration with Indo-German Tool Room
- To help in fetching QIP Centre to the university and become part of it.
- Each faculty member will have average three research scholars

### **Research & Development & Innovation:**

- Number of research scholars to be enhanced to 3 research scholars per faculty at any point of time.
- Each faculty member with Ph.D. qualification will have at least one sponsored project funded by external agency such as UGC/DST/AICTE/BRNS at any point of time.
- Each faculty member with Ph.D. qualification will have at least one consultancy project from Industry per year.
- At least five commercial products/processes/ technologies to be developed by 2021.

### **Extension & Outreach Activities**

- At least two CEPs/Workshops for industries/academia will be organized every year.
- At least one National/International conference to be organized every alternate year.
- At least 5 skill development programmes will be organized for the unemployed youth in the vicinity.

### **Faculty & Staff Development**

- Faculty will undergo on an average one week of training per year in the industry.
- Supporting staff will also undergo on an average one week of training as per training needs.

### Networking

➤ At any point of time, at least five network projects in collaboration with organizations like ICT, IIT, RRCAT, BARC and NCL will be going on.

#### Co-curricular/Professional Chapter Activities

➤ SAE BAHAI/ISHRAE chapters will be conducting activities with full swing. In addition, an ASM Students' Chapter is to be established.

➤ Robo Study Circle will be established for the students.

#### Infrastructure Development

➤ New laboratory shades admeasuring 20000 sq. ft. for various heavy duty and Precision Engineering Labs and workshop are to be constructed.

➤ A seminar room and at least one smart class room are to be provided.



## पेट्रोरसायन अभियांत्रिकी विभाग



प्रा. व्ही. पी. जवंजाळ

सहयोगी प्राध्यापक व विभाग प्रमुख

#### विभागप्रमुखांचा संदेश:

या विभागाचा २०१५-१६ या शैक्षणिक वर्षाचा अहवाल सादर करताना मला अत्यानंद होत आहे. मला हे सांगताना अभिमान वाटतोय की गेल्या २५ वर्षांप्रमाणे गेल्या वर्षीही विद्यार्थ्यांच्या सर्वांगीण विकासासाठी आमच्या विभागाने महत्त्वपूर्ण योगदान दिले आहे. हे योगदान आमचे विद्यार्थी कार्यरत असलेल्या उद्योग, व्यवसाय, नोकरी, व्यवस्थापन, संशोधन या सर्व क्षेत्रातून ठळकपणे दिसून येते.

शैक्षणिक कार्यक्रमाबोरोबरच सह-शैक्षणिक कार्यक्रमांनाही विभागामध्ये समान महत्त्व दिले जाते. पेट्रोकेमीकल इंजिनीयरिंग स्टुडंस असोसिएशन (PESA) अंतर्गत विद्यार्थ्यांना सह-शैक्षणिक कार्यक्रमामध्ये सहभागी होण्यासाठी प्रोत्साहीत केले जाते. विद्यार्थ्यांनी स्पर्धेत टिकून सक्षम बनण्यासाठी विभागाअंतर्गत कार्यशाळा, अतिथी व्याख्याने औद्योगिक भेटीसारखे उपक्रम आयोजित केले जातात.

येत्या काळामध्येही विभागामार्फत विद्यार्थ्यांना रसायन अभियांत्रिकीच्या क्षेत्रातील परिपूर्ण अभियंता बनविण्यासाठी मार्गदर्शन व प्रोत्साहन देत राहील तसेच त्यांना नवीन आव्हाने पेलण्यासाठी समर्थ बनवित राहील यांत शंका नाही.

प्रा. व्ही. पी. जवंजाळ

१. Vision - Petro Eng. विभाग त्यातील अध्यापन, संशोधन, नाविन्यता या क्षेत्रामध्ये भारतातील सर्वोत्कृष्ट विभागापैकी एक स्थान मिळविण्याचे ध्येय हे बाळगते.

Mission - विद्यार्थ्यांना त्यांची ध्येयप्राप्ती होण्यासाठी उत्कृष्ट गुणवत्ता, पूर्ण शिक्षण देणे.

२. विभागाविषयी – पेट्रोकेमीकल विभाग हा ३० विद्यार्थीक्षमतेसह १९८९ साली स्थापन करण्यात आलेला विद्यापीठाचा पहिला विभाग म्हणून मानांकित आहे. विभागामध्ये अत्याधुनिक प्रयोगशाळा, प्रगत सॉफ्टवेअर्स, अनुभवी व तरुण अध्यापकांचा संगम अशा वैशिष्ट्यांनी परिपूर्ण आहे. विभागाच्या माध्यमातून राष्ट्रीय स्तरावरील विविध कार्यशाळांचे आयोजन “उर्जासंवर्धन”, प्लॅन्ट Utilities, "Steam Engineering" या विषयांमध्ये गेल्या तीन वर्षांमध्ये करण्यात आले. २००८-०९ पासून विभागातील प्रवेशक्षमता ३० वरून ६० वाढविण्यात आली. मागील काही वर्षांमध्ये विभागातील अध्यापकांनी UGC, TEQIP कडून विविध प्रकल्पासाठी अनुदान मिळविले आहे. विद्यापीठातील विद्यार्थी संशोधन, व्यवस्थापन, उद्योग या क्षेत्रामध्ये आपले उत्कृष्ट योगदान देत आहेत.

#### ३. Overview of Academic Programme

##### ❖ Academic Programs

Academic Program	Name of Program	Duration	Intake
Bachelor of Technology	Petrochemical Engineering	Four Years	60

#### 8. Programme Educational Objective and Programme Outcomes

##### Programme Educational Objective

Objective Identifier	Objective
PEO1	अभियांत्रिकी समस्या सोडविण्यासाठी विद्यार्थ्यांना वैज्ञानिक, गणितीय व अभियांत्रिकी पाया मजबूत करणे.
PEO2	विद्यार्थ्यांना मुख्य विषयातील उत्कृष्ट व अद्यावत ज्ञानाने परिपूर्ण करणे जेणेकरून ते या ज्ञानाचा वापर करून नाविन्यपूर्ण गोष्टींचा विकास करतील व समाजातील प्रश्नांचे समाधान शोधतील.
PEO3	विद्यार्थ्यांच्या तांत्रिक बाजु मजबूत करणे जेणेकरून ते या विषयातील पदव्युत्तर पदवी घेण्यास किंवा संशोधन व विकास या क्षेत्रामध्ये स्वतःची छाप पाडू शकतील.
PEO4	प्रश्न समजून घेऊन त्याचे उत्तर शोधण्याचे कौशल्य प्राप्त करून घेण्यास त्यांना पात्र बनविणे.
PEO5	स्पर्धेमध्ये टिकून राहण्यासाठी आवश्यक असणारी कौशल्ये प्राप्त करून देणे व इतर कौशल्ये आत्मसात करण्यासाठी प्रोत्साहीत करणे.

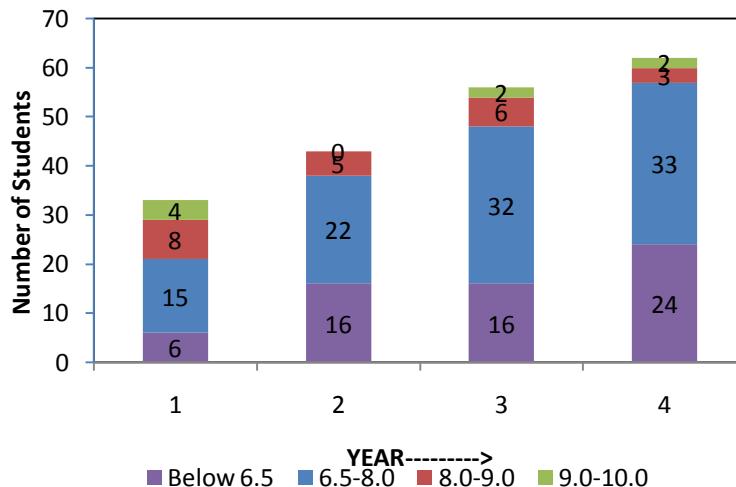
##### Programme Outcomes

Outcomes Identifier	Outcome
PO1	पदवीधारकांना गणित, भौतिकशास्त्र, रसायनशास्त्र, रसायन व पेट्रोरसायन विषयातील पायाभूत ज्ञान प्राप्त करू शकतील.
PO2	पदवीधारक रसायन अभियांत्रिकी संबंधीत समस्यांचे निराकारण, विश्लेषण करण्यास पात्र होतील.
PO3	पदवीधारक समस्यानिराकारणासाठी लागणारी आधुनिक उपकरणे हाताळण्यास पात्र होतील.
PO4	पदवीधारक रसायन/पेट्रो अभियांत्रिकी विषयाचा अर्थकारण, पर्यावरण व सामाजिक संदर्भावर होणारा परिणाम समजू शकतील.
PO5	पदवीधारकांना रसायन / पेट्रो विषयातील अत्याधुनिक ज्ञान मिळेल.
PO6	पदवीधारकांना संवाद कौशल्ये जसे की लेखन कौशल्य, भाषण कौशल्य, श्रवण कौशल्ये यांचा विकास करता येईल.
PO7	विविध समुहामध्ये काम करण्याचे कौशल्य प्राप्त होईल.
PO8	व्यावसायिक जबाबदारीचे भान होईल.
PO9	आत्मविश्वास आणि शिकण्याचे कौशल्य प्राप्त होईल.

##### ❖ पदवी विद्यार्थ्यांची सांख्यीकी माहिती

Sr. No.	Year	Open			SC			ST			OBC			VJNT			SBC			Total		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1	First	14	5	19	14	2	16	0	2	2	15	5	20	3	0	3	-	-	-	46	14	60
2	Second	15	9	24	9	2	10	-	-	-	16	11	27	6	1	7	3	0	3	48	23	71
3	Third	16	7	23	8	3	11	5	0	5	17	5	22	8	1	9	-	-	-	54	16	70
4	Fourth	22	7	29	8	2	10	4	0	4	18	2	20	8	5	13	-	-	-	60	16	76

❖ निकालाचे वर्गीकरण



Number of Passing in each year is as shown in the Chart of Current Academic year

❖ Placement

Placement Statistics	
2011-12	19
2012-13	13
2013-14	15
2014-15	08

❖ Details of Students Placed in the Year

Sr.No	Name of the Student	Organization
01	Ms. Jayashri Deshpande	Technimont Pvt. Limited, Mumbai
02	Mr. Raj Musale	UHP Technologies Pvt. Ltd., Bangalore
03	Mr. Pankaj Gadekar	UHP Technologies Pvt. Ltd., Bangalore
04	Mr. Muktaram Tidke	Arham Petrochemicals Pvt. Ltd., Ahmedabad
05	Mr. Kishor Kulkarni	NOCIL Ltd. Dahej, Gujarat.
06	Ms. Yogita Shinde	IoPE, Lonere

## ५.० शिक्षक व इतर कर्मचारी

### शिक्षक



**Prof. V.P. Jawanjal**  
Associate Professor  
M Tech ( Petrochemical Technology )  
Areas of Interest - Refinery Engineering, Separation Processes



**Prof. Mrs. S. S. Metkar**  
Associate Professor  
M Tech ( Chemical Engineering )  
Areas of Interest - Membrane processes, Reaction Engineering, Mass Transfer



**Prof. Ms. S. Chaudhari**  
Assistant Professor  
PhD ( Chemical Engineering )  
Areas of Interest - Catalysis, Mass Transfer

## कंत्राटी शिक्षक :

 <p><b>Ms. Priya Tanvidkar</b> Adhoc Faculty M Tech (Chemical Engineering)</p>	 <p><b>Ms. Pallavi Dekhne</b> Adhoc Faculty M Tech (Chemical Engineering)</p>	 <p><b>Ms. Pratiksha Khade</b> Adhoc Faculty M Tech (Chemical Engineering)</p>	 <p><b>Ms. Rajashree Jundale</b> Adhoc Faculty M Tech (Chemical Engineering)</p>	 <p><b>Ms. Priyanka Ware</b> Lab Assistant B.Sc Chemistry</p>
 <p><b>Ms. Karuna Sangale</b> Lab Assistant B.Sc Chemistry</p>	 <p><b>Ms. Lochana Patil</b> Lab Assistant B.Sc Chemistry</p>			

## ६.० सल्लगार समिती व अभ्यासमंडळ

Sr.No.	Name	Designation	Organization/Industry
01	Mr. Mahesh Purohit	General Manager	Aquapharma Ltd., Mahad
02	Mr. Suyog Sheth	Site Manager	Akzo Nobel India Ltd., Mahad
03	Mr. Parag Karambele	Manager -Technical	Excel Industries Ltd., Roha
04	Prof. Virendra Rathod	Professor	I.C.T., Mumbai
05	Dr. Amol Kulkarni	Scientist	N.C.L., Pune

## ७.० प्रयोगशाला

- Petroleum and Petroleum Products Testing Laboratory
- Petrochemical Synthesis and Petroleum assay Laboratory
- Analytical Laboratory
- Computer Laboratory

### ❖ List of major equipment and other facilities:

Sr. No.	Name of Major Equipment/Facility	Cost (>Rs. 1,00,000/-)
01	Gas Chromatograph	8.5 lakh
02	UV Spectrophotometer	3.1 lakh
03	Trace Metal Analyzer	5.8 lakh
04	Ion Chromatograph	8.5 lakh
05	High Performance Liquid Chromatography	1.25 lakh
06	Rheometer	17 lakh
07	Surface Area Analyser (BET )	3.00 lakh
08	Autoclave (High Pressure Reactor )	1.5 lakh
09	Particle Size Analyzer	5.0 lakh

## ८. प्रकल्प कार्य २०१५-२०१६

Sr.No	Topic Name
1	Experimental Studies on Waste Plastic Pyrolysis
2	Design of Distillation Column
3	Removal of Phenol by Adsorptive Bubble Separation Method
4	Lab study on Synthesis & Performance Enhancement of SSP
5	Experimental Study of Effect of Ultrasonication on Biodiesel Synthesis
6	Recovery of Phosphorus from Poultry Litter

7	Manufacture of Oxalic Acid
8	Manufacturing of Pectin From Orange Peels
9	Study of Extraction of Rice Bran with Solvent
10	Study of Rheology of Newtonian and Non-Newtonian Fluids
11	Optimization of Chemical Process using Genetic Algorithm
12	Dehydration of Ethanol by Extractive Distillation
13	Production of Soap from Different Types of Oil
14	Kitchen Waste Water Purification by Sugarcane Bagasse
15	Investigation on Drying & Baking of Potato Chips
16	Extraction of Ursolic Acid from Sanctum
17	Control System by RBS
18	Adsorption of Pesticides using Activated Carbon
19	Pyrolysis of Plastic to Form Gasoline Range Hydrocarbon
20	Reverse Polymerization
21	Optimization of Chemical System
22	Polymerization of Methyl Methacrylate
23	Toluene Methanol Separation by Using Distillation
24	Silica Removal from Rice Husk Ash
25	Simulation of Chlorobenzene Process in Aspan
26	Production of Biodiesel From Waste Cooking Oil
27	Dairy Waste Water Treatment by Using Water Hyacinth Plant
28	Comparative Study on Separation Techniques
29	A Study of Reverse Osmosis Membrane Separation
30	Optimal Tuning of Controller Parameters by Using PSO

## **9.0 INDUSTRY INSTITUTE INTERACTION**

### **9.1 Industrial Project by Students**

A group of three girl students, Ms. Randale Rajshree (Reg.No.20120539), Ms Samarth Neha (Reg.No.20120547) and Ms. Waghmare Rupali (Reg.No.20120560),from Final year B.Tech successfully completed completed project at Embio Ltd. Mahad on “Toulene-Methanol Separation by Distillation”.

### **9.2 Industrial Visits**

- Industrial visit of second year student to Gharda Chemicals, Chiplun, on 23<sup>rd</sup>July, 2015
- Thirty-eight students from third year B.Tech. attended three days STTP on “ Unit Operations and Unit Processes in Chemical Industry” at RCF Mumbai from 18- 20 January, 2016 under TEQIP-II.
- Thirty-eight students from third year B.Tech. attended three day S. T. T. P. on “Unit Operations and Unit Processes in Chemical Industry” at RCF Mumbai from 8-10<sup>th</sup> February, 2016 under TEQIP-II.



An Industrial visit to RCF Chembur from 10-12 February 2016.

## **9.0. CONFERENCES/WORKSHOP/TRAINING CONDUCTED UNDER TEQIP -II**

- Eighteen final year B.Tech students have undergone training on “Soft Skills” from 18-24th August, 2015, at Dr.B.A.T.U. Lonere,under TEQIP-II.
- Workshop on Personality Development, “ Even Higher Skills” for first year students by Dr.Vinod Patankar from 24-25<sup>th</sup> October,2015, at Dr.B.A.T.U., Lonere, under TEQIP-II.
- Guest lecture on “Secrets of Professional Communication for Better Personality and Career” on 2<sup>nd</sup> November, 2015, by Prof. AtulPatil (CoEP, Pune), at Dr.B.A.T.U., Lonere under TEQIP-II.



Personality Development Workshop- Even Higher Skills

## **¶. WORKSHOP ATTENDED BY FACULTY, STAFF AND STUDENTS OF DEPARTMENT:**

### **¶.¶ Departmental Staff Activities:**

- Prof. Pallavi Dhekne, Prof. Rajashree Jundale, Prof. Priya Tanvidkar and Prof Pratiksha Khade attended one day training program on “Pedagogy” at DBATU, Lonere, on 3<sup>rd</sup> October, 2015, under TEQIP-II.
- Prof. S. S. Metkar, Prof. Pallavee Dhekne, Prof. Rajashree Jundale attended one week workshop on ‘Optimization’ at IIT Bombay, from 2-6 November, 2015, under TEQIP-II.
- Prof. S. S. Metkar attended one week workshop on, “Recent Trends in Energy Conservation” at Dr. Babasaheb Ambedkar Technological University, Lonere from 7-12 December, 2015, under TEQIP-II
- Prof. V. P. Jawanjal attended a two days workshop on “Outcome Based Education” at D. Y. Patil College of Engineering, Pimpri, Pune from 9-10 January, 2016.
- Prof. S. S. Metkar participated in “Avishkar 2016” organized by Pune University during 10-12January, 2016 as Team Manager.
- Prof. V.P. Jawanjal delivered a guest lecture on , “Understanding Chemical Engineering Thermodynamics for Chemical Engineering Professionals” at M.I.T., Aalandi, Pune on 27<sup>th</sup> February, 2016.

### **¶.¶ Departmental Staff Activities:**

- Mrs. Priyanka N. Ware attended two days workshop on “Life Skills” on 7<sup>th</sup>& 8<sup>th</sup> August, 2015 at Dr.B.A.T.U. Lonere on under TEQIP-II.

## **¶. OTHER ACTIVITIES CONDUCTED BY DEPARTMENT**

- Teachers Day Celebration by first year student on 5<sup>th</sup> September, 2015.
- Department organized its first Alumni Meet on 12<sup>th</sup> March, 2016.
- Department organized Farewell Function to final year students on 2<sup>nd</sup> May, 2016
- Parent-Teacher meet conducted on 10<sup>th</sup> October, 2015
- Departmental celebrated Khande- Navmi on 21<sup>th</sup> October, 2015
- Fresher’s Welcome Function “ Petrochem La Fiesta 2015” on 3<sup>rd</sup> October, 2015.
- Feedback Collection.

## **¶. ACADEMIC ACHIEVEMENTS**

### **¶.¶ Faculty Achievement**

Prof. S. S. Metkar participated in “Avishkar 2016” organized by Pune University 10<sup>th</sup>– 12<sup>th</sup> January, 2016 as Team

Manager and participant in teachers category.

### **¶.¶ Distinguished Alumni of the Department**

Sr. No	Name of Alumni	Designation and Company
1	Mr. Siddhartha Desai	Entrepreneur, Option Engineering Pvt. Limited, Jogeshwar Mumbai
2	Mr. Durgesh Karande	Asst. Vice President, Polaris Financial Technology Ltd.
3	Mr. Amit Agvekar	Manger-Projects, Cognizant Technology Solutions India Pvt. Ltd., Pune
4	Mr. Manish Garg	Sr. Project Engineer- Mangalore Refinery and Petrochemicals Ltd.
5	Mr. Ravindra Bhosale	Manager-Project, Embio Limited, Mahad, Raigad
6	Mr. Suyog Shet	Site Manager- Akzo Nobel Chemicals (India) Ltd., Maharashtra Raigad
7	Dr. Shrish Sonawane	Associate Professor, National Institute of Technology Warangal (A.P.)

8	Mr. Makarand Kurkure	Project Leader- Larson and Toubro Infotech Ltd., Powai Mumbai
9	Dr. Sharad Sonnatakke	Associate Professor, Department of Chemical Engg. ICIT Mumbai
10	Mr. Laxmikant Powale	Lead IP Professional, GE India Technology Centre Pvt. Ltd Bangalore
11	Mr .Ajit Pawar	Sr.Manager-Process & Tech.,ARMAKOconsultant Pvt. Ltd Mumbai

### १३.३ Student Achievements

- Mr. Nishesh Rohatgi succeeded in GATE-2016 with AIR 1751.
- Chinmay Saraf and Riya Patil won 2<sup>nd</sup> and 3<sup>rd</sup> prize respectively in State Level Inter University Cultural Festival, “Utkarsha – 2016” at Rahuri Krushi Vidyapith, Rahuri from 4th -7th February, 2016.
- Mr. Shrikant N. Dongre and Mr. Sandip M. Lokhande from third year B.Tech got selected for scholarship from NGO, Cummins India Foundation, Pune.

### १४. Petrochemical Engineering Students Association (PESA) Council 2015-16

President:

➤ Mangesh Salunke

Cultural Secretary (Boys Representative)

➤ Sagar Raorane

Cultural Secretary (Girls Representative)

➤ Neha Samarth

Sports (Boys Representative)

➤ Akshay Shelmake

Sports (Girls Representative)

➤ Gayatri Matharkar

Literature Secretary (Boys Representative )

➤ Kishor Kulkarni

Literature Secretary (Girls Representative )

➤ Bhagyashri Khole

Treasurer

➤ Nishesh Rohatagi

### १५. EXTRACURRICULAR ACTIVITIES



## १६. Students Other Activities



## १७. DEPARTMENT STRENGTH, WEAKNESS, OPPORTUNITIES AND THREATS

### Strengths

१. समर्पित आणि प्रोत्साहीत अध्यापक वर्ग.
२. अभ्यासक्रमामध्ये रसायन अभियांत्रिकी आणि पेट्रोलियम विषयातील अत्याधुनिक ज्ञानाचा पूरेपूर संगम
३. तंत्र-अर्थशास्त्र आणि सामाजिक संदर्भाना अनुसरून अभ्यासक्रम रचना : यासाठी सॉफ्टवेअर वर आधारीत प्रशिक्षण, आंतरविद्याशाखीय आंतरक्रिया यांना प्रोत्साहन दिले जाते.
४. विभागाला नियमितपणे संशोधनासाठी राज्यसरकार यांचेकडून अनुदान मिळते.
५. माजी विद्यार्थ्यांकडून मार्गदर्शन व मदत मिळते.

### Weakness

१. विभागातील साहीत्य व साधने सुस्थितीत ठेवणे. दुरुस्तीसाठी तज्जांची वानवा तसेच सुटे भाग मिळण्यात स्थानिक पातळीवर अपुरी व्यवस्था.
२. वर्गखोल्या व प्रयोगशाळेसाठी कायमस्वरूपी जागेची व्यवस्था नाही.
३. अध्यापकांचा अपुरा वर्ग.

### Opportunities

१. विद्यापीठाच्या आसपास रासायनिक तसेच इतरही उद्योगांचे प्रकल्प.
२. दरवर्षी विभागाचे विद्यार्थी Infosys, Cognizant सारख्या उद्योगांमध्ये निवडले जातात.
३. विभागासाठी उद्योगांच्या उपलब्धतेमुळे व त्यांच्याशी असलेल्या सहकार्यात्मक संबंधामुळे फायदेशीर वातावरण.

### आव्हाने

१. पात्र अध्यापक वर्ग मिळविणे.
२. चांगले CET गुण असलेले विद्यार्थी UG साठी मिळविणे.

### विभागाचे भविष्यासाठी नियोजन

१. तांत्रिक ज्ञानाची निर्मिती संवर्धन व प्रसार करणे.
२. संशोधन शिष्यवृत्ती, नाविन्यता, व्यावसायीक कार्यक्रमासाठी बौद्धिक प्रेरक वातावरण तयार करणे.
३. राष्ट्रीय व आंतरराष्ट्रीय विकासाचे भागीदार होण्यासाठी इतर नामांकित संख्या उद्योग, माजी विद्यार्थी यांच्याशी सहकार्याचे संबंध प्रस्थापीत करणे.
५. विभागाचे रुपांतर रसायन व पेट्रोरसायन या क्षेत्रातील ज्ञानाचे केंद्रामध्ये करण्यासाठी विद्यार्थ्यांमध्ये स्पर्धात्मक गुणवत्तेला वाव देणे.

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## रसायनशास्त्र विभाग



**डॉ. ए.च. ए. मुजावर,**  
विभाग प्रमुख व सहयोगी प्राध्यापक

### १. ध्येय :

रसायनशास्त्राचे मुलभूत शिक्षण देणे तसेच अभियांत्रिकी आणि तंत्रज्ञानाच्या विविध क्षेत्रात त्याचा वापर करणे.

### २. विभागासंबंधी माहिती :

रसायनशास्त्र विभागाची स्थापना सन १९८९ मध्ये झाली. ह्या विभागांतर्गत “अभियांत्रिकी रसायनशास्त्र” भाग १ व २ हे विषय बी.टेक प्रथम वर्षाच्या सर्व शाखांना प्रायोगिक तसेच तात्किंव अशा दोन्ही पद्धतीने शिकविले जातात. तंत्रज्ञान शिक्षणासाठी आवश्यक असणारे मुलभूत रसायनशास्त्र नजरेसमोर ठेवून विषयाचा परिपूर्ण अभ्यासक्रम तयार करण्यात आला आहे. विभागामध्ये अत्याधुनिक पृथककरण साहित्याने सुसज्ज अशी प्रयोगशाळा उपलब्ध आहे. विभाग अत्याधुनिक पृथककरण साहित्याने सुसज्ज आहे.

विभागामध्ये सन २००३ पासून पी.एच.डी. अभ्यासक्रम सुरु करून संशोधनाला बाब देण्यात येत आहे. आम्ही फोटोकॅटलीस्ट, पर्यावरणीय रसायनशास्त्र, सॉलीड स्टेट केमिस्ट्री, फायटो केमेस्ट्री या विषयामध्ये संशोधन लेख प्रकाशित केले आहेत.

### ३. प्रस्तावित अभ्यासक्रम व प्रवेश क्षमता :

- अ) अभियांत्रिकी रसायनशास्त्र १ व २ - ५४० (प्र. क्षमता)
- ब) पी.एच.डी. (नोंदणी झालेले विद्यार्थी) ०३

### ४. क्रमिक उत्पत्ती :

- सत्रसमाप्तीला विद्यार्थ्यांमधील पुढे निर्देशलेल्या क्षमता विकसित होणे अपेक्षित आहे.
- विद्यार्थी जलावस्थेमधील भौतिक गुणधर्माच्या मुलभूत संकल्पना जाणून त्याचा विस्तार करू शकतील तसेच अशा गुणधर्माचे मापन करू शकतील.

- विद्यार्थी कोळसा व स्निग्ध पदार्थाचे वर्गीकरण तसेच वर्णन करून त्याचे गुणधर्म व महत्व जाणून घेऊ शकतील.
- गंज, जलरसायनशास्त्र विकासावस्था नियम तसेच विद्युत रसायनशास्त्रसंबंधी विद्यार्थी अधिक जाणून घेऊ शकतील.
- विद्यार्थी अँरमेटीक तसेच हेटर सायकलीक कम्पाऊड विषयी अधिक माहिती मिळवू शकतील.

#### ५. विद्याशाखेतील शिक्षक :



डॉ. एच. ए. मुजावर,  
विभाग प्रमुख, सहयोगी  
प्राध्यापक, पीएच.डी.  
(रसायनशास्त्र), सदस्य,  
विद्यापीठ अभ्यासमंडळ,  
(मूलभूत विज्ञान व  
मानव्यशास्त्र), सदस्य, संशोधन  
समिती, संशोधन क्षेत्रे –  
पर्यावरणीय रसायनशास्त्र,  
घनावस्थीत रसायनशास्त्र.



डॉ. पी. बी. लोखंडे :  
सहयोगी प्राध्यापक, पीएच.डी.  
(रसायनशास्त्र), सदस्य, अभ्यासमंडळ  
(मूलभूत विज्ञान व मानव्यशास्त्र)  
सदस्य, संशोधन समिती, संशोधन क्षेत्रे  
– पर्यावरणीय रसायनशास्त्र,  
घनावस्थीत रसायनशास्त्र.

#### कंत्राटी नेमणुक (शिक्षक)



कु. ए. एम. डिसाई,  
सहाय्यक प्राध्यापक, एम.एससी.  
(आँगेनिक केमिस्ट्री), अनुभव २  
वर्षे.



कु. ए. ए. खानविलकर :  
सहाय्यक प्राध्यापक, एम. एससी.  
(आँगेनिक केमिस्ट्री), अनुभव २ वर्षे

#### शिक्षकेतर कर्मचारी



सौ. सी. डी. सुतार,  
प्रयोगशाळा सहाय्यक बि.एससी.  
केमिस्ट्री, फेब्रुवारी २००९  
पासून,



श्री. आर. एम. शिंदे,  
प्रयोगशाळा सहाय्यक, बीएससी.  
केमिस्ट्री, जून २०१४ पासून



श्री. यु. के. चव्हाण,  
शिपाई

#### संशोधक विद्यार्थी :



कु. एम. एम. भगत,  
R.S. २०१४०९०१, एम. एससी.  
(नागपूर विद्यापीठ), संशोधन  
क्षेत्र



कु. एस. एस. साळवी,  
R.S. २०१५०९०१, एम. एससी.  
(मुंबई विद्यापीठ), संशोधन क्षेत्र



श्री. अमित दिंडे,  
R.S. २०१४०९०२, एम.एस्सी.  
संशोधन क्षेत्र

#### ६. विभाग सलाहगार समिती :

डॉ. एच. ए. मुजावर – अध्यक्ष  
डॉ. पी. बी. लोखंडे – सदस्य  
डॉ. ए. एस. इमाने – सदस्य  
कु. ए. ए. खानविलकर – सदस्य  
सौ. सी. डी. सुतार (प्र. सहाय्यक) – सदस्य  
श्री. विठ्ठल वाघमारे (विद्यार्थी) – सदस्य  
सौ. एम. एम. भगत – (संशोधन विद्यार्थी सदस्य)

#### ७. अधिविभाग खरेदी समिती :

डॉ. एच. ए. मुजावर – अध्यक्ष  
डॉ. पी. बी. लोखंडे – सदस्य  
डॉ. बी. बी. सिंग – सदस्य  
डॉ. एस. जी. दाहोत्रे – सदस्य  
भांडार पडताळणी अधिकारी – सदस्य  
वित्त अधिकारी – सदस्य

#### ८. संशोधन समिती :

डॉ. बी. बी. सिंग – अध्यक्ष  
डॉ. एच. ए. मुजावर – सदस्य  
डॉ. एल. एन. सिंग – सदस्य  
डॉ. पी. बी. लोखंडे – सदस्य  
डॉ. एस. जी. दाहोत्रे – सदस्य  
डॉ. ए. के. निकुम्भ बाह्य – सदस्य  
डॉ. एम. एच. पेंडसे बाह्य – सदस्य

#### ९. मुख्य सुविधा व साधनांची यादी प्रयोगशाळा खालील उपकरणांनी सुसज्ज आहे.

- Colorimeter
- Gas Chromatograph
- COD digester with titrator
- pH and conductivity meter
- Turbidity meter
- Photoreactor
- Visible Spectrophotometer
- Refractometer
- Oven/Incubator

#### १०. Journal Publications:

Name of Faculty Member	Name of Journal	Issue no., Volume no., Year,	Paper Title
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Dr.P.B.Lokhande , Dr.H.A.Mujawar	International Journal of Scientific and Engineering Research.	Vol. 7 (3) March 2016, 1113-1121.	Graphic Interpretation and assessment of water quality in the Savitri River Basin
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### ¶¶. Conferences / Seminar/Workshop (Attended and presented papers)

Name of Faculty	Place	Period	Organised by
Dr.H.A.Mujawar, Dr. P. B. Lokhande	University of Mysore, Mysore	Jan 3 to Jan 7, 2016.	Indian Science Congress Association Conference
Madhuri M. Bhagat Dr.H.A.Mujawar, Dr.P.B. Lokhande	KBP College, Vashi, Navi Mumbai – Maharashtra.	30 <sup>th</sup> Jan 2016	National conference on new horizons in chemical and environment science A review: Advanced photo catalyst and its applications
Sneha S.Salvi, Dr. P.B. Lokhande, Dr. H.A.Mujawar	at KBP College, Vashi, Navi Mumbai – Maharashtra.	30 <sup>th</sup> Jan 2015	National conference of new Horizons in chemical and Environmental science A review Recent trends in synthesis of photo catalyst
Dr.P.B.Lokhande	Ramchandra University, Chennai	17-18 Feb, 2016.	National conference on photochemical and Biotherapeutics
Sneha S.Salvi, Madhuri Bhagat	Dr. BATU, Lonere	19-20 March 2016	Training on Advanced MS Office
Madhuri Bhagat Abhijit Dinde Dr.P.B. Lokhande	Dapoli Science College, Dapoli Ratnagiri.	5-6 Feb 2016	National conference on Recent development in Chemical and material Sciences.

### ¶¶. Chemistry Laboratory:





\* \* \*

## गणित विभाग



डॉ. बी. बी. सिंग  
सहयोगी प्राध्यापक आणि विभागप्रमुख

### विभागप्रमुखांचे मनोगत

यथाशिखामयूराणानागणामनियोयथा  
तथावेद-वेदांगमगणितमूहीनंसंस्थितं ॥

वेद आणि पुराणांमध्ये अस लिहून ठेवलं आहे की 'ज्याप्रमाणे डोक्यावरील तुच्यामुळे मोर सर्व पक्षांमध्ये वरिष्ठ गणला जातो. सर्व सापांमध्ये नागमणी असलेला नाग वरिष्ठ गणला जातो त्याचप्रमाणे ज्या मनुष्याकडे गणिताचे ज्ञान आहे तो मनुष्यजातीत वरीष्ठ गणला जाता

गणितशास्त्र हे पुस्तकाच्या पानांनी बांधुन ठेवलेले नाही; त्याला शोधण्यासाठी धैर्य व संयमाची आवश्यक असते. त्याच्यावर कुणाची मालकी नाही. त्यातील संपत्ती मिळविण्यासाठी आयुष्य वेचावे लागते. ते सहजगत्या सापडत नाही. ते खडकामध्ये आढळणाऱ्या धातुसारखं असतं... ते त्या मातीसारखं नाही ज्याची सुपिकता वारंवार घेतलेल्या पिकांमुळे कमी होत जाते. ते जमिनीचा खंड नाहीये किंवा समुद्रही नाही ज्याची लांबी मोजली जाऊ शकते. ते अमर्याद आहे. सर्व जगासमोर त्याच्या आकांक्षा मोजता येणार नाहीत. त्याच्या शक्यता अमर्याद आहेत. त्याच्या आवाक्याला कुणी मर्यादा वा सीमारेषा घालु शकत नाही ते प्रत्येक अणुमध्ये आहे. पानामध्ये आहे. कक्ष्यांमध्ये आहे आणि ते प्राणि व फुलांच्या रुपाने समोर येण्यास तयार असते.

गणित शास्त्राचे हेच तत्वज्ञान नजरेसमोर ठेऊन अभ्यासक्रम तयार करण्यात आलेला आहे. पदवी शिक्षणाबरोबरच विभागामध्ये पीएच.डी. अभ्यासक्रम सुद्धा सुरु करण्यात आला आहे. हे संशोधन मुख्यत्वे करून उपयोजित गणितशास्त्र या विषयामध्ये आहे. या मनोगताच्या माध्यमातून मला सांगावेसे वाटते की गणितशास्त्राचा

अभ्यासक्रम अभियांत्रिकी विद्यार्थ्यांना गणिती आव्हाने पेलण्यास नक्कीच मदत करू शकेल. गुणवत्तापूर्ण शिक्षण आणि संशोधन करून भारतामधील नामांकित संस्थांमध्ये स्थान मिळविणे. समाजाला उपयोगी पडेल अशा ज्ञानाची निर्मिती करणे.

डॉ. बी. बी. सिंग

#### १. ध्येय :

विद्यार्थ्यांमध्ये शिक्षण व संशोधनाच्या माध्यमातून विविध गणितीय संकल्पनाची समज निर्माण करणे.

#### २. विभागासंबंधी माहिती :

गणितशास्त्र विभागाची सुरवात सन १९८९ मध्ये विद्यापीठ स्थापनेबरोबरच झाली. विभागाच्या माध्यमातून मुख्यत्वेकरून पदवी स्तरावर गणित अध्यापन केले जाते. त्यामुळे अभ्यासक्रमाची रचना करताना आजच्या विद्यार्थ्यांमधुन घडणारे उद्याचे अभियंते, शास्त्रज्ञ यांचा विचार केला आहे. ही गरज पुणे करण्यासाठी गणित १, २ व ३ हे विषय समाविष्ट करण्यात आले आहेत. भावी अभियंते व शास्त्रज्ञ यांना पडणारे भौतिक, सामाजिक, आर्थिक, जीवशास्त्रीय प्रश्नांचा विचार करून गणितीय पद्धतींशी या अभ्यासक्रमात त्यांची ओळख करून दिली आहे.

### ३. Program Educational Objectives(PEOs) & Programme Outcomes (POs)

#### Programme Educational Objectives (PEOs)

- ❖ To prepare students to excel in technical fields in order to pursue postgraduation in Engineering and Sciences programs or to succeed in industry/technical profession, R&D institutions through global and new emerging areas in Mathematics
- ❖ To provide students with a solid foundation in mathematical fundamentals required to solve engineering problems
- ❖ To train students with good mathematical breadth in core subjects so as to comprehend and simulate to cater changing needs of society, analyze, design, and create novel products and solutions for the real-life problems
- ❖ To provide students with conducive academic environment, awareness of excellence and the life-long learning in mathematical concepts needed for successful professional career.

#### Programme Outcomes (POs)

The graduates will possess the knowledge of differential equations, vector calculus, complex variable, matrix theory, probability theory, partial differentiation, infinite series, Fourier series, Fourier transforms, Laplace transforms, Integral equations, Mean value theorems, etc.

#### ४. शिक्षक वर्ग

The faculty position of the Department is as follows:

Faculty	Designation	Qualification	Area of Specialization
Dr. B. B. Singh	Associate Professor	M.Sc., Ph.D. (BHU)	Fluid Mechanics
Dr. V. J. Bansod	Associate Professor	M.Sc., Ph.D. (IIT, Kanpur)	Computational Fluid Dynamics
Mr. C. N. Guled	Teaching Assistant	M. Sc.	Fluid Mechanics
Ms. Nasreen Bano Shaikh Muslim	Teaching Assistant	M. Sc.	Fluid Mechanics
Mr. Ravindra Sonawane	Assistant Professor (Adhoc)	M.Sc.	Applied Mathematics
Mr. Sayaji Jadhav	Assistant Professor (Adhoc)	M.Sc.	Applied Mathematics

### **डॉ. बी. बी. सिंग :**

डॉ. सिंग हे १९९३ पासून या विभागामध्ये कार्यरत आहेत. तेब्हापासून ते विभागाच्या विकासामध्ये वेगवेगळ्या माध्यमातून आपले योगदान देत आहेत. त्यांच्या मार्गदर्शनाखाली २ विद्यार्थ्यांनी पीएच.डी. मिळविली आहे तर दोघेजण सध्या करीत आहेत.

डॉ. सिंग यांनी खालील भुमिकेतून आपले योगदान दिले आहे.

- १) विभाग प्रमुख
- २) सदस्य व अध्यक्ष, अभ्यास मंडळ व मानवशास्त्र
- ३) वस्तीगृह अधिक्षक
- ४) सदस्य

### **डॉ. व्ही. जे. बनसोड**

यांनी १९९५ मध्ये विभागामध्ये काम करण्यास सुरवात केली त्यांनी खाली भुमिकेतून योगदान दिले आहे.

- १) विभाग प्रमुख
- २) अध्यक्ष - अभ्यास मंडळ, विज्ञान व मानवशास्त्र
- ३) वस्तीगृह अधिक्षक
- ४) सदस्य - ग्रंथपाल समिती
- ५) सदस्य - विद्वत परिषद

श्री. सी. एन. गुलेद

पीएच.डी. करीत आहेत, त्याचबरोबर अध्यापनात मदत करीत आहेत.

### **नसरीन बानो मुस्लिम शेख :**

पीएच.डी. करीत आहेत.

### **रविंद्र सोनवणे/सयाजी जाधव :**

कंत्राटी पद्धतीने सहाय्यक प्राध्यापक या पदावर काम करीत आहेत.

## **५. प्रकाशित शोधनिबंध / पुस्तके**

### **५.१ Books**

Sr. No.	Title	Author/s	Publisher
1	A Course in Engineering Mathematics (Vol.I) (ISSN: 978-93-8335-216-6)	Dr. B. B. Singh and Dr. I. M. Chandarki	Synergy Knowledgeware, Mumbai
2	A Course in Engineering Mathematics (Vol.II) (ISSN: 978-93-8335-210-4)	Dr. B. B. Singh	Synergy Knowledgeware, Mumbai
3	A Course in Engineering Mathematics (Vol.III) (ISSN: 978-93-8335-217-3)	Dr. B. B. Singh	Synergy Knowledgeware, Mumbai
4	Engineering Mathematics-II (ISSN: 978-81-8407-900-5)	Dr. B. B. Singh, Prof. T. D. Pawar, Dr. I. M. Chandarki and Prof. S. S. Hiremath	Tech-Max Publications, Pune
5	Integral Transforms and Their Engineering Applications (ISBN: 978-81-924-2747-8)	Dr. B. B. Singh	Synergy Knowledgeware, Mumbai

#### ५.२ Monographs

Sr.No.	Title	Author/s	Publisher
1.	A Quantitative and Analytical Analysis of the Laminar Boundary Layer Equations	Dr. B. B. Singh	Lambert Academic Publishing, Germany
2.	Elastico-viscous Fluid Flows	Dr. Sanjay Kulkarni and Dr. B. B. Singh	Lambert Academic Publishing, Germany
3.	Asymptotic Behaviour , Convex-Concave and Oscillatory Solutions of Non-autonomous Differential Equations	Dr. B. B. Singh and Dr. I. M. Chandarki	Lambert Academic Publishing, Germany
4.	Research Methodology and Quantitative Methods of Computer Applications (ISBN: 978-3—659-87791-9)	Dr. B. B. Singh and C. N. Guled	Lambert Academic Publishing, Germany

#### ५.३ परिसंचाद / शोधनिबंध

- Asymptotic Behaviour Of The Velocity Profiles In The Rotation Of A Disk, Proceedings of Mathematical Society, BHU, 2015 by Dr. B. B. Singh and C. N. Guled
- Application of Differential Transformation Method and Padé Approximation to MHD Boundary Layer Flow over a non-linear Stretching Sheet, Proceedings of Mathematical Society, BHU, 2016 by Dr. B. B. Singh and C. N. Guled

#### ५.४ Participation/Attendance in Summer & Winter Schools / National& International Conferences/Workshops

- Dr. B. B. Singh participated in a Faculty Development Programme on - ‘Recent Trends in Energy Research’, organized by Chemical and Mechanical Engineering Department of Dr. BATU, Lonere, during 7.12.2015 to 11.12.2015 (One week).
  - Dr. B. B. Singh participated in the MHRD-TEQIP-KITE one week Workshop under the ‘Knowledge Incubation under TEQIP’ on -‘Mathematical Principles in Engineering’, organized by IIT, Bombay, during 18.06.2016 to 22.06.2016(One week).
  - Dr. B. B. Singh participated in one week Workshop on- ‘Outcome Based Education’, organized by Dr. BATU, Lonere, during 23.06.2016 to 28.06.2016.
- C. N. Guled presented a research paper on the topic entitled- “Application of Differential Transformation Method and Padé Approximation to MHD Boundary Layer Flow over a non-linear Stretching Sheet” (Authors: C. N. Guled and Dr. B. B. Singh) at the Annual Conference of The Mathematical Society-Banaras Hindu University on ‘Mathematical and Statistical Techniques and Their Applications to Science and Engineering’ organized by Dehradun Institute of Technology, Dehradun during November 20-21, 2015.
- C. N. Guled presented a research paper entitled- “The Solution of Glauret-Jet Problem by Differential Transformation Method and Padé approximation”(Authors: C. N. Guled and Dr. B. B. Singh) at the 103<sup>rd</sup> Annual Conference of Indian Science Congress on the theme of ‘Science and Technology for Indigenous Development in India’ organized by Mysore University, Mysore during January 3<sup>rd</sup>-7<sup>th</sup>, 2016.

#### ६. Lecture Delivered

- Dr. B. B. Singh delivered a talk on- ‘Role of Assertiveness in Team Building in a Faculty Development Programme on- ‘Recent Trends in Energy Research’, organized jointly by the Department of Chemical and Mechanical of our University during December 7<sup>th</sup>-11<sup>th</sup>, 2016 under the aegis of TEQIP-II.



## भौतिकशास्त्र विभाग



डॉ. एल. एन. सिंग

सहयोगी प्राध्यापक आणि विभागप्रमुख

### १. विभागप्रमुखांचा संदेश :

भौतिक शास्त्र विभागाचा वार्षिक अहवाल सादर करताना मला अत्यानंद होत आहे. मनुष्यजातीचा इतिहास हा विज्ञानाचा इतिहास आहे आणि विज्ञानाचा इतिहास हा मुख्यत्वेकरून भौतिकशास्त्राचा इतिहास आहे. काळाच्या ओघामध्ये विज्ञानाच्या अनेक उगम पावलेल्या शाखा या भौतिक शास्त्रापासून विभक्त झालेल्या आहेत.

आजचे अभियंते व शास्त्रज्ञ वाहननिर्मिती, संगणक, विद्युत निर्मिती सारख्या अनेक आविष्कारांसाठी भौतिक शास्त्राचे सिद्धांत व शोध यांचा वापर करतात. त्यामुळे आधुनिक अभियांत्रिकी व तंत्रज्ञान हे भौतिक शास्त्राच्या सिद्धांतामध्ये रुजलेले आहे असे म्हणण्यात काही शंका नाही. त्यामुळे व भौतिकशास्त्र हे तंत्रज्ञानाच्या विकासाचा पाया आहे असे म्हणणे उचित ठरेल.

विभागामध्ये - Ferrites, Garnets व CMR Nano material या विषयामध्ये पी.एच.डी अभ्यासक्रम सुरु आहे. विभागामार्फत अभियांत्रिकी भौतिकशास्त्र १ व २ हे विषय बी. टेक प्रथम वर्षाच्या सर्व शाखांना शिकविला जातो. विभागामध्ये प्रयोगशाळा उभी करण्यात आली आहे. संशोधन क्षेत्रातील अद्यावत घडामोर्डांचा आढावा घेण्यासाठी चर्चासत्रांच आयोजन केले जाते.

डॉ. एल. एन. सिंग

### उद्दिष्ट :

अभियांत्रिकी विद्यार्थ्यांमध्ये गुणवत्तापूर्ण शिक्षण व संशोधनाच्या माध्यमातून वैज्ञानिक समज निर्माण करणे.

### ध्येय :

विद्यार्थ्यांमध्ये विज्ञान व वैज्ञानिक सिद्धांताची सखोल जाण निर्माण करणे ज्याचा वापर करून त्यांना तांत्रिक कौशल्ये विकसित करता येतील.

### २. विभागाविषयी :

भौतिकशास्त्रामधील पायाभूत ज्ञान अभियांत्रिकी व तंत्रज्ञानाच्या विद्यार्थ्यांना देण्याच्या उद्देशाने सन १९८९ मध्ये या विभागाची स्थापना करण्यात आली. सन २००४ पासून या विभागामध्ये पीएच.डी. अभ्यासक्रम सुरु करण्यात आला आहे व या माध्यमातून विद्यार्थ्यांना संशोधन शिष्यवृत्ती देण्यात येते.

भौतिक शास्त्राचा परिपूर्ण असा अभ्यासक्रम तयार करण्यात आला आहे. याच्या माध्यमातून व विद्यार्थ्यांना भौतिकशास्त्र व उपयोजित भौतिकशास्त्राचे सखोल व सविस्तर ज्ञान मिळेल अशी आशा आहे. अभ्यासक्रमाच्या गरजेनुरुप तसेच संशोधनासाठी विभागामध्ये सुसज्ज असे प्रयोगशाळा उपलब्ध आहे.

विभागामधील शिक्षक संशोधन तसेच विषयातील अद्यावत घडामोडी या विषयांमध्ये पारंगत आहेत. पीएच.डी. पाच विद्यार्थ्यांनी मिळविलेली आहे. दोन विद्यार्थी या विषयामध्ये संशोधन करीत आहेत. विभागप्रमुख डॉ. एल. एन. सिंग यांनी अमेरिका, इटली, जर्मनी, सिंगापूर, जपान, मलेशिया, फ्रान्स, स्वित्जर्लंड, यु. के., बेल्जीयम, ऑस्ट्रीया, ऑस्ट्रेलिया आणि न्यूझिलॅंड या देशांचे अभ्यास दौरे केलेले आहेत. त्यांना नायजेरियाच्या गॉम्बी स्टेट युनिवर्सिटीमध्ये आमंत्रित करण्यात आले आहे.

### शिक्षक कर्मचारी :



डॉ. एल. एन. सिंग,  
सहयोगी प्राध्यापक व विभागप्रमुख,  
एम.एस्सी. BHU  
पीएचडी.आयआयटी मुंबई,  
अनुभव २४ वर्ष.



डॉ. एस. जी. दाहोत्रे  
सहयोगी प्राध्यापक,  
एम.एस्सी. पुणे विद्यापीठ

### केंद्राटी शिक्षक :



ए.आर.भालेकर,  
सहायक प्राध्यापक,  
एम. एस्सी, पुणे विद्यापीठ,  
३ वर्षाचा अनुभव.



यु. घ्वी. शिंदे,  
सहायक प्राध्यापक,  
एम. एस्सी, पुणे विद्यापीठ,  
अनुभव १ वर्ष

### शिक्षकेतर कर्मचारी



सौ. एम. ए. शिंदे,  
प्रयोगशाळा सहायक  
इंजिनियरिंग मध्ये पदवीका.



श्री. के. डी. म्हापळकर,  
प्रयो. सहायक  
आयटीआय

### अतिरिक्त जबाबदार्या : डॉ. एल. एन. सिंग

- Member of Executive Council Member of Academic Council
- Member of Board of Studies Professor Library In charge
- CAP Director In charge of Science day celebration
- Faculty Adviser of first year students Inspired award Examiner
- Coordinator of NAAC Presentation of Science and Humanity Department
- Member for the promotion of non teaching staff
- Sanskaran adhikari (Version officer) TEQIP Member

### डॉ. एस. जी. दाहोत्रे

- Rector of hostel.
- I/C Head of Department
- Member of Anti-ragging Committee
- Examination Co-ordinator
- Sr. Supervisor for examination
- Member B.Tech. Admission Process
- Co-ordinator of Science day celebration

### ३. सल्लागार मंडळ :

विभागाला वेळोवेळी सल्ला देण्यासाठी तसेच विभागाचे नियमन करण्यासाठी सल्लागार मंडळ स्थापन करण्यात आले आहे. यामध्ये औद्योगिक व शैक्षणिक स्थापन करण्यात आले आहे. यामध्ये औद्योगिक व शैक्षणिक क्षेत्रातील नामवंताचा समावेश करण्यात आला आहे. या मंडळावर अभ्यासक्रमासाठी तसेच संशोधनासाठी सुचना देण्याची जबाबदारी आहे.

अ.क्र.	नाव	पद
१.	प्रा. एस. एस. मेजर	Department of Physics, IIT, Bombay
२.	प्रा. अजित कुलकर्णी	Department of Metallurgy And Material Science
३.	प्रा. एम. अस्लम	Department of Physics IIT Bombay.
४.	प्रा. एम. ए. मदरे	Associate Professor and Head Department of Physics, IMJ College, Mumbai University.
५.	प्रा. सी. एस. गर्दे	Department of Engineering and Applied Sciences, Vishwakarma Institute of Information Technology, Savitribai Phule Pune University.

#### ४. शोधनिबंध

A) Papers published in international Journals(Impact Factor – 2-3)

1. Morphology and  $g_{eff}$  Study of Nano  $Mn_{1-x}Zn_xFe_2O_4$ , S.G.Dahotre , L. N. Singh, Journal of Nanotechnology and Nano-Engineering, Volume 1, issue 3, 1-5 (2015)

#### ६. प्रयोगशाळा

S.N.	Name of the Instrument	Qty	Total price
1	Vacuum oven 800°C	01	25250
2	Furnace 1000°C	01	14280
3	Furnace 1400°C	01	74500
4	Hot Plate	01	4135
5	Magnetic stirrer	01	1605
6	Agate mortar pestles	01	7220
7	Alumina boats	01	4950
8	Crucibles	01	1500
9	Hall effect set up	02	110800
10	G.M. Counter set up	02	52000
11	He-Ne Laser	02	22000
12	e/m Magnetron set up	01	24400
13	Resistivity by using Four probe set up	02	20600
14	Diode kit	04	19200
15	Transistor kit	04	20800
16	Newton's Rings set up	02	10200
17	Polarimeter	02	20000
18	Thermocouple	01	
19	Band gap measurement kit	02	16400

#### ७. पीएच.डी. अभ्यासक्रम

The Department is conducting a Ph.D. programme in the following research areas

- Nanostructured Materials
- Nanostructures Ferrites, Garnet Materials
- Nanostructured CMR Materials.
- Carbon Nano Tubes

#### ८. आंतरराष्ट्रीय परिसंवाद / कार्यशाळा / शोधनिबंध

A) Winter School / Summer School / QIP Short-term Course

- One week workshop on Outcome Based Education under TEQIP, Dr. BATU,Lonere, June 23-28 (2016)
- One week CEP course on Mathematical Principles in Engineering, IIT Bombay, June 18 -22 (2016)
- One week CEP course on Optimization in Design and Engineering, IIT Bombay, Nov 02-06 (2015)

#### List of Ph.D .Students

Sr.No.	Name of student	Title of thesis	Status
1	Mrs.S.G. Dahotre	Study of Mn-Zn Ferrites at Nanolevel	Degree awarded
2	Mr.U.L.Shinde	Study of Transport and Magnetoresistance in Nanomanganites.	Degree awarded
3	Mr.K.D.Barhate	Development of electrode for hydrogen / oxygen fuel cell using carbon nanotube.	Degree awarded
4	Mrs. N.B.Srivastava	Mechanism of Transport and colossal Magneto resistance in Manganites	Degree awarded
5	Mr.Sandesh V.Jaybhaye	Hydrogen adsorption/desorption by carbon nanomaterials	Degree awarded
6	Mr.F.A.Ahmed	Study of nickel based Nanoferrites.	ongoing
7	Mr. A.R. Bhalekar	Study of substituted YIG at nano level	ongoing

University of Genova,Italy, Dr. Sandesh Jaybhaye



102<sup>th</sup> Indian Science Congress-2015, Mumbai University.



Nano Science Lab Mumbai University



#### सामर्थ्य :

- उच्चशिक्षित तसेच समर्पित शिक्षकवर्ग
- भौतिकशास्त्रांचा परिपुर्ण असा अभ्यासक्रम
- शिक्षकांचे संशोधन प्रकाशन
- सुसज्ज प्रयोगशाळा.

### उणिवा :

- साहित्य दुरुस्ती व जपणुकीची अपुरी सुविधा, संगणक, युपीएस वर्गैरे उपकरणांची योग्य जपणूक व वेळोवेळी दुरुस्तीची सोय उपलब्ध नाही.
- प्रयोगशाळेसाठी प्रशस्त जागा नाही.
- शिक्षकांची कमतरता

### संधी :

- भौतिक शास्त्रामध्ये पदव्युत्तर विभाग सुरु करणे.
- मटेरियल सायन्स ही शाखा सुरु करणे.
- अभियांत्रिकी भौतिकशास्त्र विषयात बी. टेक. सुरु करणे

### आव्हाने :

- उपलब्ध कर्मचाऱ्यामार्फत सर्व उपक्रम चालविणे.
- पीएच.डी. पात्र असे अनुभवी शिक्षकांची भरती करणे.
- पीएच.डी. साठी चांगले विद्यार्थी मिळविणे.

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## इंग्रजी विभाग



डॉ. ए. पी. शेष

सहाय्यक प्राध्यापक व विभाग प्रमुख

सन २०१५-२०१६ या शैक्षणिक वर्षाचा अहवाल सादर करताना मला अत्यानंद होत आहे. औद्योगिक क्षेत्रामध्ये गरजेची असलेली भाषा कौशल्ये अभियांत्रिकी विद्यार्थ्यांना देणे व त्यांच्या संभाषण कौशल्यांचा विकास करणे हे या अधिविभागाचे मुख्य उद्दीष्ट आहे. विभागामध्ये सुसज्ज व अत्याधुनिक सोयींनी युक्त अशी ‘‘भाषा प्रयोगशाळा’’ जी सध्या काळाची गरज मानली जाते. विभागातील शिक्षक विद्यार्थ्यांना GRE आणि TOEFL सारख्या परीक्षांसाठी मार्गदर्शन करीत असतात. विभागाच्या माध्यमातून विद्यार्थ्यांच्या परिपूर्ण विकासाकडे लक्ष दिले जाते जेणेकरून त्यांच्यातून कर्तव्याची जाण असणारे व समाज आणि राष्ट्र याविषयी निष्ठा असणारे युवक तयार व्हावेत. विभागामार्फत "Communication Skills" आणि "Basic Course in Human Rights" हे दोन विषय बी.टेक प्रथम वर्षाच्या सर्व शाखांना शिकविले जातात. अध्यापन-अध्ययन क्रियेमध्ये तंत्रज्ञानाचा वापर करण्याच्या उद्देशाने विभागामध्ये सन २००४-२००५ पासून “भाषा प्रयोगशाळा” सुरु करण्यात आली आहे. वर्गाखोल्यातील शिक्षणाबरोबरच “भाषा प्रयोगशाळेच्या” माध्यमातून भाषाकौशल्याचा विकास चांगल्या पद्धतीने होतो असं पाहण्यात आलं आहे.

डॉ. ए. पी. शेष

### Programme Educational Objectives (PEOs):

- विद्यार्थ्यांना इंग्रजी भाषेचे ज्ञान व समज देणे.
- विद्यार्थ्यांना शैक्षणिक व बाह्यजागत आवश्यक असणारी प्रभावी लेखन कौशल्ये विकसित करणे.
- विद्यार्थ्यांना ओळख, नितिमत्ता, मुल्ये विकसित करण्यासाठी संधी उपलब्ध करून देणे.
- विद्यार्थ्यांना श्रवण, लेखन, भाषण, वाचन, कौशल्याची ओळख करून देणे.

### Programme Outcomes (POs):

- विद्यार्थी स्वतःच्या भाषिक कौशल्याचा विकास करतील.

- ते श्रवण, वाचन, लेखन, भाषण यामध्ये कौशल्य मिळवू शकतील.
- वेगवेगळ्या पद्धतीचे लेखन करण्यात ते पात्र होतील.
- विद्यार्थी स्वतःला समाजाचा उत्तम घटक म्हणून सादर करु शकतील.
- विद्यार्थी स्वतःला आत्मविश्वासू व लायक बनविण्यास समर्थ ठरतील.

### शिक्षक :



डॉ. अमित पी. शेष,  
सहाय्यक प्राध्यापक,  
विभाग प्रमुख इंग्रजी विभाग, एम.ए.पी.एच.डी., (इंग्रजी)



श्री. एस. वाय. कोळेकर,  
सहाय्यक प्राध्यापक,  
(कंत्राटी नेमणूक),  
एम.ए. (इंग्रजी), एनईटी-३ वेळा)

### इतर जबाबदाऱ्या :

- डॉ. ए. पी. शेष, IQAC आयक्युएसीवर सदस्य म्हणून काम करीत आहेत. (ऑक्टो २०११ पासून.)
- डॉ. ए. पी. शेष, वार्षिक अहवाल समितीवर सदस्य म्हणून काम करीत आहेत.
- डॉ. ए. पी. शेष, BOS (मूलभूत विज्ञान व मानवशास्त्र) वर सदस्य म्हणून काम करीत आहेत.
- डॉ. ए. पी. शेष, राजारामबापू इन्स्टिट्यूट ऑफ टेक्नॉलॉजी या परिक्षा मंडळावर सदस्य म्हणून काम करीत आहेत. Since AY - 2005-2006 सादर केलेले असंशोधन लेख.

### व्याख्याने :

- १) डॉ. ए. पी. शेष “ताण व्यवस्थापन आणि सादरीकरण कौशल्य” या विषयावर सरस्वती कॉलेज ऑफ इंजिनिअरिंग खारघर, नवी मुंबई.
- २) प्रयोगशाळा तंत्रज्ञासाठी प्रशिक्षण कार्यक्रम – डॉ. बा. आ. तं. वि. लोणे.
- ३) “उत्तर आधुनिकतावाद” या विषयावर महात्मा गांधी महाविद्यालय अहमदपूर जि. लातूर येथे व्याख्यान.

### सदस्यत्व :

आजीव सदस्य : Indian Association For American Studies

- आजीव सदस्य : MELUS – MELOKW

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## ग्रंथालय

### प्रस्तावना

विद्यापीठातील विविध अभ्यासक्रमांसाठी ग्रंथालयाची भूमिका अतिशय महत्वाची असते. ग्रंथालय हा विद्यापीठाच्या अध्ययन व अध्यापनामध्ये एक अविभाज्य भाग आहे. विद्यापीठाच्या स्थापनेच्या वर्षातच १९८९ मध्ये ग्रंथालयाची सुरवात झाली.

शिक्षक विद्यार्थी व संशोधकांना त्यांच्या विषयाची सखोल माहिती मिळविताना ग्रंथालयाचा मोठा फायदा होतो. त्यांचे संशोधन प्रबंध व प्रकल्प लिहिताना ग्रंथालयातील विविध माध्यमांचा त्यांना उपयोग होतो. सध्या ग्रंथालयाचा विस्तार २१,००० स्के. फूट एवढ्या जागेत आहे. जेथे जवळजवळ ९५,००० पुस्तके उपलब्ध आहेत. यामध्ये क्रमिक पुस्तके, नियतकालिके, नियतकालिकांच्या जुन्या आवृत्त्या इ. उपलब्ध आहेत. डॉ. बाबासाहेब आंबेडकर, महात्मा गांधी यांच्यासारख्या व्यक्तिमत्वांबद्दलची अनेक पुस्तके, ग्रंथ ह्या ग्रंथालयामध्ये उपलब्ध आहेत. लघुकथा, काढंबन्या व इंग्रजी भाषांमधील विविध प्रकारचे साहित्य येथे उपलब्ध आहे. ग्रंथालयाचे कामकाज सकाळी ९.३० ते संध्याकाळी ५.३० ह्या वेळेत चालते. परिक्षेच्या कालावधीमध्ये ग्रंथालय जास्त वेळासाठी खुले असते. ग्रंथालयातील सर्व पुस्तकांची विभागणी DDCC (Dewey Decimal Classification) ह्या प्रणालीच्या सहाय्याने अद्यावत केली आहे. तसेच LIBMAN ह्या प्रणालीच्या सहाय्याने अंशतः संगणकीकरण करण्यात आले आहे.

### ग्रंथालय समिती :

विद्यापीठांमध्ये ग्रंथालयाचे कामकाज अद्यावत तसेच इतर कार्यामध्ये सहाय्य करण्यासाठी ग्रंथालय समिती काम करते. मा. कुलगुरु हे या समितीचे अध्यक्ष आहेत. या समितीचा कार्यकाळ तीन वर्षांचा असतो. या समितीची वर्षातून दोन वेळा बैठक होते.

### पुस्तक पेढी :

ग्रंथालयाच्या पुस्तकपेढीमध्ये पदवीस्तरावरील सर्व आवश्यक क्रमिक पुस्तकांचा समावेश होतो. संबंधीत विषयाच्या अध्यापकांनी सुचविलेल्या पुस्तकांनी पुस्तक पेढी समृद्ध करण्यात आली आहे. ही पुस्तके प्रत्येक सत्राच्या सुरवातीला सर्व विद्यार्थ्यांना “वापरा आणि परत करा.” या तत्वावर पुस्तकांच्या १५% किमतीवर देण्यात येतात. विद्यापीठ ग्रंथालय विद्यापीठातील सर्व विद्यार्थ्यांना क्रमीक पुस्तके पुरविण्याइतके सक्षम आहे. प्रत्येक सत्राच्या सुरवातीला विद्यार्थ्यांना पुस्तके देण्यात येतात आणि सत्राच्या शेवटी विद्यार्थी पुस्तके परत करतात. पुस्तक पेढीमध्ये उपलब्ध असणाऱ्या एकुण पुस्तकांची संख्या ४३,९९९ असून त्यांची किमत ७७४८४०/- इतकी आहे. पदवी, पदविका तसेच पदव्युत्तर पदवी स्तरावरील जवळपास ४९२९ विद्यार्थी पुस्तकपेढीचा लाभ घेतात. विद्यार्थ्यांकडून घेण्यात येणाऱ्या शुल्कामधून ग्रंथालयाला जवळपास ६६९४२६ रु. शुल्क मिळाले आहे. पुस्तकपेढीतून विद्यार्थ्यांना १८२८७ पुस्तके देण्यात आली आहेत.

### पुस्तकपेढी (एस.सी./एस.टी) संग्रह :

महाराष्ट्र शासनाकडून आर्थिकदृष्ट्या मागास तसेच आरक्षणाचा लाभ घेणाऱ्या विद्यार्थ्यांसाठी पुस्तके उपलब्ध करून देण्यात असणारी या संग्रहातील पुस्तके मागासवर्गीय विद्यार्थ्यांना (S. C. /S. T. Collection) योजना विद्यापीठ ग्रंथालयात राबविली जाते. ही पुस्तके एस. सी. / एस. टी. च्या विद्यार्थ्यांना मोफत वापरण्यास दिली जातात. सन २०१३-१४ मध्ये या योजनेसाठी कार्यक्रम अधिकारी समाज कल्याण विभाग महाराष्ट्र शासन यांचेकडून एस. टी. विद्यार्थ्यांना पुस्तक खरेदीसाठी २,६७,००० रुपयांचे विशेष अनुदान ग्रंथालयास मिळाले.

### आंतरजाल सुविधा : (Internet Service)

(Online Journal) तसेच इतर महत्वाची माहिती शोधण्यासाठी ग्रंथालयाने वापरकर्त्यांसाठी Internet सेवा पुरविलेली आहे. ग्रंथालयामध्ये त्यासाठी स्वतंत्र २० संगणकांची व्यवस्था करण्यात आली आहे. विद्यार्थी याचा उपयोग E-books तसेच Online Journal वाचण्यासाठी करतात.

**यु.जी.सी. इन्फोनेट सेवा :** विद्यापीठ ग्रंथालय यु. जी. सी. च्या Infonet या कार्यक्रमाचा उपक्रमाचा हिस्सा आहे. केंद्र अहमदाबाद यांच्यासोबत केलेल्या करारानुसार ग्रंथालयाला खालील ई रिसोर्सेस प्राप्त झाले आहेत.

Infonet शिवाय ग्रंथालय IEL ची वर्गीकरणात आहे. जे अंभियांत्रिकी संस्थासाठी महत्वाची गरज आहे. त्याच्या वर्गीकरणात विद्यापीठ ग्रंथालयाने २९,४९,७७५/-रुपये शुल्क भरले आहे.

S.No	Resource Names	Resource URL	No of Journal
1	American Chemical Society	http://pubs.acs.org/	37
2	Chembridge University Press	http://journals.cambridge.org/	224
3	Economic & Political Weekly	http://epw.in/	1
4	ISID	http://isid.org.in/	Database
5	JCCC	http://jgateplus.com/	Database
6	Springer Link	http://link.springer.com/	1389+
7	Taylor & Francis	http:// www.tandfonline.com	1079
8	Wiley - Backwell		908

- A. LIBRARY AUTOMOTION (UGC) : 8,15,000/-
- B. ST BOOK-BANK FROM PRAKALP ADHIKARI PEN RAIGAD,  
YEAR 2012-13, SANCTION AMOUNT RS. : 2,67,000/-
- C. SC/ST BOOK-BANK FROM SAMAHKALYAN ALIBAG-RAIGAD, YEAR 2014-15,  
SANCTION AMOUNT RS. 9, 22,000/-

BOOKS EXPENDITURE 2015-16  
(A) LIBRARY BOOKS

YEAR	ACC. NO		TOTAL COPIES ADDED 1165	FUND		TOTAL AMOUNT
	START	END		UGC	TEQIP-II	
	37109	38273		10,93,451/-	9,32,695/-	
2015-16						20,26,146/-

(B) BOOK-BANK BOOKS

YEAR	ACC. NO		TOTAL COPIES ADDED 713	TOTAL TITLE ADDED 21	FUND	TOTAL AMOUNT
	START	END				
	45483	46195				
2015-16						4,36,558/-

(C) ST BOOK BANK

YEAR	ACC. NO		TOTAL COPIES ADDED 1519	TOTAL TITLE ADDED 155	FUND	TOTAL AMOUNT
	START	END				
	4378	5897				
2015-16						6,54,752/-

(D) ST BOOK BANK

YEAR	ACC. NO		TOTAL COPIES ADDED 278	TOTAL TITLE ADDED 49	FUND	TOTAL AMOUNT
	START	END				
	307	584				
2015-16						1,20,009/-

Library Expenditure on Periodicals 2015-16 = Rs.347946/-

Foreign: 267641/-

Indian: 22944/-

Other Magazine: 57361/-

Expenditure on E Journals2015-16

IEL GROWTH PLAN 2015-16 - Rs.2149775.00/-  
 List of the existing periodicals  
 Periodicals /Journals/ Educational Magazine:

Sr.No	Name of Periodical	Sr.No	Name of Periodical
1	ACE Update Magazine	18	Journal of Structural Engineering
2	ACI Concrete International	19	Mechanical Engineering.
3	ACI Structural Engineering	20	MIT Technology Review
4	ACM Computing Surveys	21	National Geography - US
5	ACM Trans on Software & Methodology	22	OEM Update Magazine
6	American Scientist - US	23	Offshore
7	B2B Purchase Magazine	24	Oil & Gas Journal
8	Chemical Engineering Education	25	Popular Mechanics - US
9	Chemical Engineering Progress	26	Popular Science - US
10	Civil Engineering Magazine	27	Scientific American - US
11	Construction Technology	28	Time
12	Construction Week	29	India Power
13	Construction World	30	Electrical India
14	EPR Electrical Power Review Magazine	31	Chemical Engineering World
15	Hydrocarbon Processing	32	Lighting India
16	Indian Highway	33	Cooling India
17	JLC Journal of Light Construction		

**Other Magazine/Periodical**

Sr.No.	Name of Magazine	Sr.No.	Name of Magazine
1	All Indian Management	32	Overdrive
2	Auto Component India	33	PC Quest
3	Auto car India	34	Physics for You
4	Business India	35	Popular Science - India
5	Business Today	36	Pratiyogita Darpan
6	Business World	37	Pratiyogita Kiran
7	Bulletin Unique Academy	38	Reader Digest
8	Chanakya Mandal	39	Saptahik Sakal
9	Chemistry Today	40	Science Refresher
10	Chronicle	41	Science Reporter
11	Competition Refresher	42	Spardha Pariksha
12	Competition Success Review	43	Tell Me Why
13	Competition Wizard	44	The Caravan
14	Digit	45	The Week
15	Economic Times Magazine	46	Top Gear
16	Economic Times Wealth	47	Udyojak
17	Electronics For You	48	Yojana (Marathi)
18	Employment News	49	Data Quest
19	Engineering Success Review	50	Sport Star
20	Express Computer	51	Power Watch
21	Frontline	52	CAR India

22	General Knowledge / G.K	53	Outlook Traveler
23	India Forbes	54	CV Commercial Vehicle
24	India Today	55	Motoring World
25	Inside Outside	56	What Hi Fi ?
26	Kurushetra	57	Electronics Bazar
27	Lokprabha	58	Voice & Data
28	Lokrajya	59	Lonely Planet
29	Mathematics Today	60	BBC Knowledge
30	My Mobile	61	Open Source For You
31	Outlook		

#### Library at Glance

LIBRARY BOOKS	:	38273
BOOK-BANK BOOKS	:	46195
BOOK-BANK (IOPE)	:	3812
SC/ST COLLECTION	:	5897
ST COLLECTION	:	278
NUMBER OF SINGLE TITLE	:	24035
NUMBER OF REFERENCE BOOKS	:	4648
BUILTUP AREA OF LIBRARY	:	25000 SQ.FT.
NUMBER OF LIBRARY STAFF	:	05
DURING WORKING DAY	:	09.30AM TO 5.45 PM
NUMBER OF SEATS IN READING SPACE	:	300
NUMBER OF REGISTERED USERS	:	5090
NUMBER OF USERS PER DAY	:	310
SOFTWARE USE	:	LIB-MAN (Introduced from June 2011)
NUMBER OF PERIODICAL	:	93
International Periodicals	:	18
National Periodicals	:	15
Other Magazine	:	60
ONLINE E-JOURNALS	:	IEEE & UGC INFONET 8 E-RESOURCES
BOUNDED VOLUME	:	3237
AUDIO & VIDEO CASSETS	:	481
CHEMICAL ABSTRACTS	:	1017
VIDEO DVD'S (EDUCATIONAL MATERIALS)	:	27
PHD THESIS	:	37
M.TECH DISSERTATION	:	697
NO. OF NEWS PAPER	:	24

ADDED IN 2015-16

Sr. No.	Material	Qty	COST IN RS
01	XEROX CUM PRINTER - MP2014	01	47,197.50
02	XEROX CUM PRINTER - MP2001L	01	71,820.00
03	PRINTER - SP210 SU	02	18454.80

**Library Staff**

<b>Sr.No.</b>	<b>Name</b>	<b>Qualification</b>	<b>Designation</b>
1	Mr. S. P. Vaidya	B.Sc.M.Lib.Sc, MPhil, PGDLAN	Librarian
2	Mr. A. R. Palkar	M.Lib & Inf.Sci	Assistant Librarian
3	Mr. M. A. Bhingare	B.A.	Clerk cum typist
4	Mr. M. R. Naik	10th Pass	Peon
5	Mr. M. K. Korpe	5th Pass	Peon



## राष्ट्रीय छात्र सेना (NCC)

राष्ट्रीय छात्र सेनेच्या माध्यमातून विद्यापीठामध्ये विविध कार्यक्रमांचे आयोजन करण्यात आले. छात्रसैनिक सध्या कॅप्टन मिळींद पी. भगत यांच्या मार्गदर्शनाखाली कार्यरत आहेत.

१) आंतरराष्ट्रीय योग दिवस - २०१५ : विद्यापीठामध्ये २१ जून २०१५ रोजी आंतरराष्ट्रीय योगदिवसाचे आयोजन करण्यात आले. यामध्ये ८०० पेक्षा जास्त विद्यार्थ्यांनी आपला सहभाग नोंदविला. विद्यापीठाचे कुलसचिव डॉ. विकास सरगडे यांच्या हस्ते या कार्यक्रमाचे उद्घाटन झाले. त्याचबरोबर IOPE चे प्राचार्य डॉ. मधुकर दाभाडे, कॅप्टन मिळींद भगत कार्यक्रमासाठी हजर होते.



- २) दिव्यांग व्यक्ती सर्वेक्षण : परिसरातील दिव्यांगी व्यक्तीचे छात्रसैनिकांच्या माध्यमातून सर्वेक्षण करण्यात आले. तसेच त्यांचे राहणीमान व प्रश्न समजावून घेण्यात आले.
- ३) स्वातंत्र्य दिन २०१५ : छात्रसैनिकांनी २०१५ च्या स्वातंत्र्यदिनातील संचलनामध्ये सहभाग घेतला.
- ४) एसएसबी प्रशिक्षण : १) विद्यापीठामध्ये एसएसबी प्रशिक्षण कार्यक्रम घेण्यात आला. यामध्ये इंग्रजी विभागाप्रमुख डॉ. ए. पी. शेष यांनी ‘व्यक्तिमत्त्व विकास भाषेतील अडथळे आणि अस्खलीत इंग्रजी’ या विषयावर विद्यार्थ्यांना मार्गदर्शन केले. २) एसएसबी ची निवड प्रक्रिया या विषयावर कर्नल गणेश बाबु यांनी व्याख्यान दिले.



५) मांगरुळ स्वच्छता सर्वेक्षण अभियान : २० ऑक्टोबर २०१५ ला छात्रसैनिकांनी मांगरुळ गावची स्वच्छता केली. हे गाव राष्ट्रीय छात्र सेना कडे दत्तक घेण्यात आले आहे.



६) राष्ट्रीय एकता दिवस : ३१ ऑक्टोबर २०१५ ला सरदार पटेल यांच्या जयंतीनिमित्त राष्ट्रीय एकता दिनाचे आयोजन करण्यात आले. यानिमित्ताने विद्यार्थ्यांनी पथनाट्ये, वकृत्व स्पर्धा, निंबंध स्पर्धा यामध्ये सहभाग नोंदविला.

७) कारगिल दिवस : १५ जानेवारी २०१६ रोजी छात्र सैनिकांनी कारगिल मधील हुतात्म्यांना श्रद्धांजली अर्पण केली.

८) प्रजासत्ताक दिन २०१६ : २६ जानेवारी २०१६ रोजी प्रजासत्ताक दिनाचे आयोजन करण्यात आले. आदरणीय मुख्य अतिथी डॉ. विजय बाबु, विभागप्रमुख, रसायन अभियांत्रिकी यांच्या हस्ते ध्वजारोहण करण्यात आले. छात्रसैनिकांनी शिस्तबद्ध संचालनाद्वारे ध्वजास सलामी दिली. त्यानंतर प्रमुख पाहुण्यांनी उपस्थितांना संबोधित केले. याप्रसंगी सर्व शिक्षक शिक्षकेतर कर्मचारी व विद्यार्थी उपस्थित होते. राष्ट्रीय सेवा योजनेच्या विद्यार्थ्यांनी याप्रसंगी लेझीम प्रात्यक्षिक सादर केले. तसेच अवयवदान या विषयावर पथनाट्येही सादर करण्यात आली. छात्रसैनिकांनी मार्शल आर्टच्या विविध कवायती सादर केल्या. प्रसंगी अनाथांसाठी निधीही जमा करण्यात आला. रा. रा. से. गीताने कार्यक्रमाचा समारोप करण्यात आला.

९) नेमबाजी स्पर्धा : विद्यार्थ्यांना मांगरुळ गाव येथे रायफल प्रशिक्षण देऊन त्यांची नेमबाजीची स्पर्धा घेण्यात आली. तसेच विजेत्यांना सन्मानित करण्यात आले.

१०) सायकल मोहिम – रायगड : ३१ जानेवारी २०१६ रोजी एकूण १० छात्र सैनिकांनी या मोहिमेत भाग घेऊन रायगड मोहिम पुर्ण केली.



११) Spirit of India मध्ये सहभाग : छात्रसैनिकांनी ऑस्ट्रेलियन माजी मंत्री पॅट फॉर्मरॉन यांच्या Spirit of India मोहिमेत सहभाग घेऊन त्यांच्या सोबत २५ किमी पर्यंत धावून सहभाग नोंदविला.



१२) रायगड पदभ्रमंती : २० मार्च २०१६ दिवशी छात्रसैनिकांनी विद्यापीठ ते रायगड किळा इथपर्यंत पदभ्रमंती केली. त्यांनी रायगडपर्यंत पोहोचण्यासाठी सहाद्रीच्या विविध रांगा पार केल्या. एकूण ४५ विद्यार्थींनी सहभाग घेतला. एकूण १५ किमी अंतर पार करण्यात आले.

१३) पदविदान समारंभ – २०१६ : ६ एप्रिल २०१६ रोजी आयोजित १९ व्या पदविदान समारंभामध्ये छात्रसैनिकांनी स्वयंसेवकाचे कार्य केले. त्याचबरोबर अभियंता वसंत २०१६ मध्येही छात्रसैनिकांनी सहभाग नोंदविला.



१४) सर्प प्रदर्शन : सर्पमीत्र श्री सदक कडवेकर यांचे माहितीपूर्ण व्याख्यान आयोजित करण्यात आले. यामध्ये विविध विषारी तसेच बिनविषारी सापांची माहिती देण्यात आली. प्रत्यक्ष विद्यार्थींनी साप हातामध्ये घेऊन आपल्या विविध शंकाचे निरसन केले.

१५) महाराष्ट्र दिन २०१६ : १ मे २०१६ रोजी विद्यापीठाचे कुलगुरु डॉ. विलास गायकर यांच्या हस्ते ध्वजारोहण करून महाराष्ट्र दिन साजरा करण्यात आला. यानंतर प्रमुख पाहुण्यांनी सर्वांना मार्गदर्शन केले. त्यानंतर आदरणीय कुलगुरु यांचे हस्ते आय.ओ.पी.ई. परिसरात वृक्षारोपण करण्यात आले.





## राष्ट्रीय सेवा योजना :

२०१५-२०१६ या शैक्षणिक वर्षातील राष्ट्रीय सेवा योजनेने आयोजित केलेले/सहभाग नोंदविलेले कार्यक्रम

- १) रक्तदान शिबिर व थालसिमिया निदान शिबिर : १७ एप्रिल २०१५ या दिवशी रक्तदान शिबिर आयोजित करण्यात आले ज्याचे उद्घाटन आदरणीय कुलगुरु डॉ. व्ही. एन. गाडे यांच्या हस्ते झाले. या शिबीरामध्ये जे. जे. हॉस्पिटलच्या माध्यमातून एकूण ३२६ युनीट रक्त जमा करण्यात आले. या दगम्यान प्रथम वर्ष बी.टेकच्या जवळपास ३४८ विद्यार्थ्यांची थालसिमिया चाचणी घेण्यात आली.
- २) प्रवेश सहाय्यता केंद्र : (२-५ ते १५-१८ जून २०१५) : प्रथम वर्ष बी.टेक.च्या विद्यार्थ्यांसाठी प्रवेश प्रक्रियेत मदत करण्यासाठी सहाय्यता केंद्र स्थापन करण्यात आले. विद्यार्थी व पालकांना या केंद्रामार्फत मार्गदर्शन व मदत करण्यात आली.
- ३) वृक्षारोपण (५ जून २०१५) : विद्यापीठामध्ये वृक्षारोपणाचे आयोजन करण्यात आले. एकूण ७५ रोपे परिसरात लावण्यात आली.
- ४) प्रश्नमंजुषा स्पर्धा (२७ ऑगस्ट २०१५) : व्यक्तीमत्व व नेतृत्वगुण विकास या विषयावर स्वामी विवेकानंद सेवासमिती हस्तिकेश, उत्तराखण्ड यांच्याकडून प्रश्नमंजुषा आयोजित करण्यात आली. एकूण १२५ स्वयंसेवकांनी सहभाग नोंदविला.
- ५) निबंधलेखन स्पर्धा (२९ सप्टेंबर २०१५) : “नागरीकरणांचा विकास व संस्कृतिचा न्हास” या विषयावर स्पर्धा आयोजित करण्यात आली. ‘डॉ. ए. पी. जे. अब्दुल कलाम एक वैज्ञानिक’ हा विषय देण्यात आला.
- ६) रांगोळी स्पर्धा (३० सप्टेंबर २०१५) : निसर्ग वाचवा – जीवन वाचवा” या विषयावरील रांगोळी स्पर्धेत एकूण २२ स्वयंसेवकांनी सहभाग नोंदविला.
- ७) प्रश्नमंजुषा स्पर्धा (१ ऑक्टोबर २०१५) : ‘डॉ. ए. पी. जे. अब्दुल कलाम जीवन व कार्य’ या विषयावर आयोजित स्पर्धेत ५६ स्वयंसेवकांनी सहभाग नोंदविला.
- ८) जागतिक अहिंसा व शांतीदिन (२ ऑक्टोबर २०१५) : महात्मा गांधी यांची जयंती ‘परिसर स्वच्छता’, विद्यार्थ्यांची भाषणे, भजने या माध्यमातून साजरा केली.
- ९) स्वच्छता मोहिम (११ ऑक्टो. २०१५) : स्वच्छ भारत मोहिमे अंतर्गत दत्तक गाव ‘न्हावे’ येथे २५० स्वयंसेवकांमार्फत स्वच्छता मोहिम राबविली.
- १०) राष्ट्रीय एकता दिवस (३१ ऑक्टोबर २०१५) : सरदार वल्लभभाई पटेल यांची जयंती विद्यार्थ्यांची भाषणे, ‘राष्ट्रीय एकता प्रतिज्ञा’ व ‘एकतेसाठी धावा’ अशा विविध उपक्रमांच्या माध्यमातून साजरी करण्यात आली.
- ११) संविधान दिन (२६ नोव्हेंबर २०१५) : घटनेच्या सरनाऱ्याचे वाचन करून संविधान दिन साजरा करण्यात आला. “डॉ. आंबेडकर आणि भारतीय संविधान” या विषयावर डॉ. वाल्मिक निकाळजे यांचे व्याख्यान आयोजित करण्यात आले होते.
- १२) रायगड महोत्सव (२२-२४ जानेवारी २०१६) : सांस्कृतिक कार्य मंत्रालय महाराष्ट्र शासन यांच्यामार्फत आयोजित ‘रायगड महोत्सव’या कार्यक्रमात विद्यापीठाचे ४३ स्वयंसेवक सहभागी झाले होते.
- १३) प्रजासत्ताक दिन (२६ जानेवारी २०१६) : राष्ट्रीय सेवा स्वयंसेवकांनी विविध कार्यक्रम जसे पथनाट्य, देशभक्तीवर गीत व नृत्य सादर केले तसेच संचलनामध्येही सहभाग नोंदविला.

१४) रा.से.यो. वार्षिक शिबिर (११-१७ मार्च २०१६) : सात दिवसांचे शिबिर विद्यापीठ परिसरात घेण्यात आले. यामध्ये एकूण १४४ स्वयंसेवक ६४ विद्यार्थी व ५० विद्यार्थीनींनी सहभाग नोंदविला. शिबिराच्या माध्यमातून १५० मीटरचा बंधारा बांधण्यात आला. ज्याच्या माध्यमातून विद्यापीठ परिसरातील वृक्षांना जलसिंचन करणे सोयीचे झाले आहे. त्याचबरोबर राज्यस्तरीय कार्यक्रम “आव्हान २०१६” “प्रेरणा शिबिर २०१६” आणि “उत्कर्ष २०१६” मध्ये विद्यापीठाच्या स्वयंसेवकांनी सहभाग घेतला.

#### क्रिडा :

- १) Zest २०१६ मध्ये या राष्ट्रीय क्रिडा स्पर्धेत सहभाग घेऊन ७ सुवर्ण, १ रजत पदक जिंकले. स्थळ : पुणे
- २) MIT पुणे येथे आयोजित Summit-2016 या राष्ट्रीय क्रिडा स्पर्धेत २ सुवर्ण व १२ रजत मिळविले.
- ३) उर्जा २०१६ या विद्यापीठ स्तरीय क्रिडा स्पर्धेचे आयोजन केले.
- ४) नागरी संरक्षण शिबिराचे शिक्षक - शिक्षकेतर कर्मचारी व विद्यार्थी यांचेसाठी आयोजन यामध्ये १३४ सदस्य

सहभागी झाले.

#### १२५ व्या आंबेडकर जयंतीचे आयोजन :

दरवर्षी विद्यापीठामध्ये डॉ. बाबासाहेब आंबेडकर स्मृती व्याख्यानमालेचे आयोजन केले जाते. यानिमित्ताने विविध उपक्रमांचे आयोजन केले जाते. वकृत्व स्पर्धा, निंबंध स्पर्धा, रांगोळी स्पर्धा, प्रश्नमंजुषा, मुर्तीकाम, काव्यवाचन स्पर्धा यांचे आयोजन केले जाते. यामध्ये एकूण १५० विद्यार्थीनी सहभाग घतला. यासाठी पुढील विषय देण्यात आले होते.

- डॉ. बाबासाहेब आंबेडकर आणि राष्ट्र उभारणीत त्यांचे योगदान.
- डॉ. बाबासाहेब आंबेडकर यांचे महिला सबलीकरणात योगदान.
- डॉ. बाबासाहेब आंबेडकर आणि भारतीय संविधान
- डॉ. बाबासाहेब आंबेडकर आणि एक शिक्षण शास्त्र
- डॉ. बाबासाहेब आंबेडकर आणि सामाजिक समतेत त्यांचे योगदान याबरोबरच महात्मा फुले तसेच सावित्रीबाई फुले यांची जयंतीही विद्यापीठामध्ये साजरी करण्यात आली.



Elocution Competition



Savitribai Phule Jayanti



## इंस्टिट्यूट ऑफ पेट्रोकेमिकल इंजिनिअरिंग

हे विद्यापीठाच्या अखत्यारीत चालविले जाणारे तंत्रनिकेतन आहे ज्याची स्थापना १९८२ मध्ये रसायन अभियांत्रिकीच्या ४० विद्यार्थीक्षमतेने सुरुवात झाली होती. वरचेवर प्रगती करीत आजतागायत या संस्थेमध्ये अनेक अभ्यासक्रमाची सुरुवात झाली आहे. दरवर्षीची प्रवेशक्षमता हि ५३४ एवढी आहे. सध्या १४१२ विद्यार्थी या संस्थेमध्ये शिक्षण घेत असून त्यापैकी ५२९ मुली आहेत. जवळपास २६० मुली आणि १०० मुले यांच्यासाठी वसतिगृहाची सोय उपलब्ध आहे. या शैक्षणिक वर्षामध्ये ३० विद्यार्थ्यांना ADVANCED DIPLOMA IN WATER QUALITY MANAGEMENT या अभ्यासक्रमासाठी प्रवेश देण्यात आला आहे. हा एक वर्षाचा रोजगाराभिमुख अभ्यासक्रम असून तो M/s Ion Exchange India Ltd., Wipro Water यांसारख्या जल उद्योगांच्या मदतीने राबविण्यात येत आहे. बहुतांश विद्यार्थ्यांना रोजगाराच्या चांगल्या संधी या उद्योगांकडून मिळत आहेत.

यावर्षी Godrej Bouce, Vikhroli , M/s Positive Packaging Pvt. Ltd. Wipro Water आणि L & T यांच्याकडून रोजगारासाठी मुलाखती आयोजित करण्यात आल्या ज्यामध्ये २० विद्यार्थ्यांची निवड करण्यात आली. तंत्रनिकेतनाच्या माध्यमातून सामाजिक विकास योजना (CDTP योजना):

हि केंद्रशासनाची योजना असून त्या माध्यमातून ग्रामीण युवक, शाळाबाह्य व स्थिरांना विविध कौशल्यामध्ये प्रशिक्षित करण्यासाठी राबविण्यात येते. यावर्षी संस्थेमध्ये जवळपास ७३७ लोकांना Garment Making, Basic Computer, Computer Hardware Maintenance, Electrician, TALLY या कौशल्यांचे प्रशिक्षण देण्यासाठी विशेष शिक्षित आयोजन करण्यात आले. ग्रामीण भागामध्ये सुशोभिकरणाच्या वस्तू व पर्स बनविण्याचे शिक्षण देण्यासाठी विशेष शिक्षित आयोजन करण्यात आले. स्वच्छता व आरोग्य या विषयांवर रायगड जिल्ह्याच्या आदिवासी भागामध्ये तज्ज डॉक्टरांचे व्याख्यान आयोजित करण्यात आले. विद्युत अभियांत्रिकीच्या विद्यार्थ्यांकडून उर्जाबिचत तसेच Electrical Safety या विषयांवर ग्रामीण लोकांसाठी प्रात्यक्षिक शिक्षित आयोजित करण्यात आले.

- समाजोपयोगी योजनांमध्ये उत्कृष्ट योगदान दिल्याबद्दल संस्थेला मनिला, फिलिपिन्स येथे २२-२३ जून, २०१५ रोजी आयोजित झालेल्या आंतरराष्ट्रीय परिसंवादामध्ये भारताचे प्रतिनिधित्व करण्याची संधी मिळाली.
- MEDA Zo प्रायोजित केलेला Energy Efficiency Project संस्थेमध्ये यशस्वीरीत्या पूर्ण करण्यात आला. (रु. २५ लाख). डॉ. लिंगायत व त्यांच्या चमूने प्रकल्प उत्कृष्टरित्या राबविला.
- संस्थेला Council of Power, Utilities , New Delhi यांचेकडून आठवा India Power -ward नोव्हेम्बर-२०१५ मध्ये तसेच MEDA, पुणे यांचेकडून दहावा उर्जाबिचत पुरस्कार फेब्रुवारी-२०१६ मध्ये प्रदान करण्यात आला.
- संस्थेमध्ये Digital India सपाहाचे आयोजन करण्यात आले. Digital India या विषयावर भित्तीपत्र प्रदर्शन आयोजित करण्यात आले. त्याच बरोवर विन्हेरे-महाड येथे जनजागृती शिक्षित आयोजन करण्यात आले.
- संस्थेमध्ये महिला दिन साजरा करण्यात आला ज्यामध्ये पोलीस निरीक्षक, गोरेगाव सौ. निशा जाधव यांनी महिला सुरक्षा या विषयावर आपली मते मांडली.
- सर्व विभागांमध्ये प्रत्येक सत्रामध्ये नियमितपणे पालकसभा आयोजित केली जाते.
- संस्थेमध्ये स्वच्छ भारत अभियानांतर्गत परिसर स्वच्छता कार्यक्रम आयोजित करण्यात आला.
- उपकरणीय अभियांत्रिकी विभागाचे विभागप्रमुख प्रा. डी. एस. करंजकर यांनी पंजाब विद्यापीठ चंडीगढ मधून पीएचडी पदवी संपादन केली. तसेच प्रा. डी. जी. जाधव, विभागप्रमुख, विद्युत व दूरसंचार अभियांत्रिकी विभाग यांनी पंजाब विद्यापीठ चंडीगढ मधून पीएचडी पदवी संपादन केली.
- उपकरणीय अभियांत्रिकी विभागाकडून PLC, DCS या विषयावर एकदिवसीय कार्यशाळेचे आयोजन करण्यात आले ज्यामध्ये १२५ विद्यार्थ्यांनी सहभाग नोंदविला.
- उपकरणीय अभियांत्रिकी विभागाकडून Automation Safety, Industrial -utomation, Employability Skills Development या विषयावर तज्ज प्राध्यापकांचे व्याख्यान आयोजित करण्यात आले. विद्यार्थ्यांनी COE, Pune येथे पार पडलेल्या MINDSP-RK 2K15 मध्ये सहभाग नोंदविला.
- उपकरणीय अभियांत्रिकी विभागाच्या विद्यार्थ्यांनी M/s Privi Organics, Mahad येथे अभ्यास दौरा केला.

### **I. Community Development through Polytechnic (CDTP)**

A. Skill Based Training:

S.N		No of Persons Trained	No of Persons Employed
1.	Males	373	149
2.	Females	364	102
3.	Total	737	251
4.	No. of villages covered	27	

B. Trades-wise Training/Employment Details:

Sr. No.	Name of the Trade	No. of Persons trained	No of Persons Employed
1.	Computers Fundamentals MS Office Internet (ICT101)	277	77
2.	Architectural & Civil 2D drafting with AutoCAD (ICT116)	142	38
3.	Computer Hardware & Networking (ICT105)	48	14
4.	Electrician (ELE101, ELE202, ELE203, ELE204, ELE209)	113	65
5.	Tally (ICT102)	87	26
6.	Garment Making (GAR105, GAR213)	70	31
7.	Total	737	251

#### SKILL DEVELOPMENT TRAINING PROGRAMME UNDER CDTP

- Name of Training Programme : Electrician
- Duration of the Programme :6 months (01-07-15 to 31-12-15)
- Number of Trainees :19

#### SKILL DEVELOPMENT TRAINING PROGRAMME UNDER CDTP SCHEME

- Name of Training Programme : AutoCAD
- Duration of the Programme :3 months (2-12-15 to 1-03-16)
- Number of Trainees :11

#### SKILL DEVELOPMENT TRAINING PROGRAMME UNDER CDTP

- Name of Training Programme : Tally
- Duration of the Programme : 3 months (14-05-15 to 13-08-15)
- Number of Trainees :31



#### SKILL DEVELOPMENT TRAINING PROGRAMME UNDER CDTP

- Name of Training Programme : Computer Fundamental MS Office and Internet
- Duration of the Programme :3 months (12-08-15 to 10-11-15)
- Number of Trainees : 46

#### **SKILL DEVELOPMENT TRAINING PROGRAMME UNDER CDTP**

- Name of Training Programme : Computer Hardwar and Networking
- Duration of the Programme :4 months (15-07-15 to 14-11-15)
- Number of Trainees :21

#### **SKILL DEVELOPMENT TRAINING PROGRAMME UNDER CDTP**

- Name of Training Programme : Computer Fundamental MS Office and Internet
- Duration of the Programme :3 months (06-10-15 to 5-01-16) Number of Trainees : 38

#### **SKILL DEVELOPMENT TRAINING PROGRAMME UNDER CDTP**

- Name of Training Programme : Computer Fundamentals, MS-Office and Internet
- Duration of the Programme :3 months (21-08-15 to 20-11-15)
- Number of Trainees :24

#### **SKILL DEVELOPMENT TRAINING PROGRAMME UNDER CDTP SCHEME**

- Name of Training Programme : Garment Making
- Duration of the Programme :6 months (01-10-15 to 31-03-16)
- Number of Trainees :30

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

1. Name of Student and Address: Vishal TukaramNandgaonkar
2. Status of Employment: Wage Employed
3. Details of Employment: Working as an Technician

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

1. Name of Student and Address: Manoj Suresh Mahadik, Name of the Trade: Electrician
2. Status of Employment: Self Employed
3. Details of Employment:Working as an Electrician, Crane Operator

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

1. Name of Student and Address: Sham UdayKadam,
2. Name of the Trade: Electrician Duration : 6 months (10-09-2014 to 09-03-2015)
3. Status of Employment: Wage Employed
4. Details of Employment: Working as an Electrician in POSCO Maharashtra Steel

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

1. Name of Student and Address: Chetan Suresh Kadu
2. Details of Employment: Working as an Electrician

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

1. Name of Student and Address: AlpeshKashiramGugale
2. Name of the Trade: Electrician
3. Duration of Training: 6 months (14-09-2015 to 13-03-2016)
4. Status of Employment: Wage Employed
5. Details of Employment: Working as an Electrician in POSCO Maharashtra Steel

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

1. Name of Student and Address: SayaliDayanandDalvi
2. Duration of Training: 3 months (15-07-15 to 14-10-15)
3. Status of Employment: Wage Employed
4. Details of Employment: Trainer Under CDTP Scheme

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

1. Name of Student and Address:AkshataYamajiPawar
2. Year of Training : 2015-2016 Name of the Trade: Garment Making
3. Duration of Training: 6months (01-10-2015 to 31-3-2016)
4. Status of Employment : Self Employed

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

- Name of Student and Address: Ronit Harichandra Gaikwad
- Name of the Trade: Tally (ERP9) Duration: 3 months (14-05-15 to 13-8-15)
- Status of Employment: Wage Employed
- Distance of Employment Place from the Polytechnic: 32 Km

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

1. Name of Student and Address: Suchita Suresh Kasare, Nadgaon-Mahad
2. Name of the Trade: Garment Making
3. Duration of Training: 6 months (03-01-2011 to 30-06-2011)
4. Status of Employment: Self Employed

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

- Name of Student and Address: Reshma Ganesh Kode, Patharshet-Kolad
- Name of the Trade: Garment Making Duration: 6 months (1-10-2015-31-3-2016)
- Status of Employment: Self Employed

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

1. Name of Student and Address: Fizan Naeem Pardeshi
2. Year of Training: 2015-16 Name of the Trade: Electricain
3. Duration of Training: 6 Months (01/07/2015 to 31/12/2015)
4. Status of Employment : Self Employed

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

1. Name of Student and Address: Rakesh Ramesh Shedge
2. Year of Training: 2015-16 Name of the Trade: Electricain
3. Duration of Training: 6 Months (01/07/2015 to 31/12/2015)
4. Status of Employment : Self Employed

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

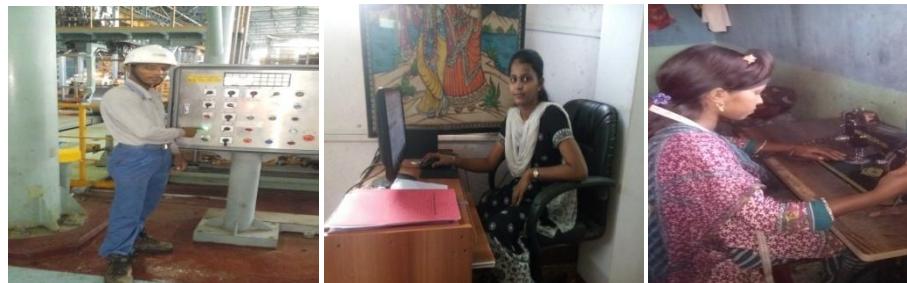
1. Name of Student and Address: Ayyan Wanab Mulla
2. Year of Training: 2015-16 Name of the Trade: Electricain
3. Duration of Training: 6 Months (01/07/2015 to 31/12/2015)
4. Status of Employment : Self Employed

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

1. Name of Student and Address: Sagar Amar kasare
2. Year of Training: 2015-16 Name of the Trade: Electricain
3. Duration of Training: 6 Months (01/07/2015 to 31/12/2015)
4. Status of Employment : Self Employed

#### **EMPLOYMENT STATUS OF STUDENTS WHO TOOK TRAINING UNDER CDTP**

1. Name of Student and Address: Sagar Sadanand
2. Name of the Trade: Electrician Duration of Training: 6 months
3. Status of Employment: Wage Employed





## DISSEMINATION AND APPLICATION OF APPROPRIATE TECHNOLOGY UNDER CDTP

1. Name of the Technology transferred: Solar Water heater

Date/Duration of Technology Transfer :15-01-2015

Solar Water Heater at the Hostel Alaknanda as shown in the following photographs

2. Name of the Technology transferred: Energy Efficient Fans

Date/Duration of Technology Transfer :25-02-2015

Energy Efficient Fans at the Hostel Alaknanda as shown in the following photographs. Electricity Bill of the Hostel is reduced by Rs. 15000 per month





3. Type of Technical Support Service : Purse making

Date/Duration of Support Service : 10-02-16

Details about the activity carried out : Work shop on purse making is organized for the rural women in Patharshet. Around 35 womens were trained. An exhibition of the various items prepared was arranged in the institute.



दि. १५ जानेवारी, २०१५ रोजी आदिवासी आश्रमशाळा, माणगाव येथील ४५ मुलांनी त्यांच्या शिक्षकांसोबत CDTP च्या मुख्य केंद्राला भेट दिली. नोकरी मार्गदर्शन व जनजागृती या विषयावर संस्थेचे प्राचार्य आणि मुख्य समन्वयक डॉ. एम. ए. दाभाडे, विद्युत अभियांत्रिकी विभागाचे प्रमुख डॉ. एन. एस. लिंगायत, डॉ. बी. सी. खरबस व विभागातील शिक्षक सौ. दीपिका शेठ यांनी मार्गदर्शन केले. यावेळी ग्रंथालय, प्रयोगशाळा, कार्यशाळा इ. मध्ये भेट देऊन विद्यार्थ्यांमध्ये जागृती करण्यात आली.





#### AWARENESS PROGRAMMES UNDER CDTP SCHEME

Name of Awareness Programme: Women Security and Cyber Crime

Date/Duration of Awareness Programme : 08-03-16

<p>Women Safety program is arranged on 8<sup>th</sup> March 2016 from 12.30 PM to 5.00PM at Institute of Petrochemical Engineering auditorium. Mrs. Nisha Jadhav, Inspector of Police of Goregaon Police Station delivered speech on women's security and women rights. She also gave information about the cyber crime and disadvantages of using android mobiles. Mrs. Jadhav interacted with the women and answered their questions.</p>	
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### Electrical Engineering Department

#### A. Departmental Activities:

Sr. No.	Activity	Date	Remarks	Co-coordinator
1	Teacher's Day	05/09/2015	Celebrated by students of the department	Prof. S. S. Shet Prof. U. A. Kharat
2	Engineer's Day celebration	15/09/2015	Expert Lecture on Automation by Mr. Kiran Patil	Dr. N. S. Lingayat Prof. U. A. Kharat
3	Guest Lecture on Energy Auditing tool to increase Energy Efficiency	30/09/2015	Mr. A. Y. Mehandale, Enrich Consultants, Pune	Dr. N. S. Lingayat
4	PCB workshop	23/10/2015	Mr. Prathmesh Pawar	Prof. D. S. Shet
5	Industrial Visit	23/10/2015	ITI Nandavi. All second year students participated.	Prof. M. B. Mudholkar
6	Parents Meet	31/10/2015	62 parents were attended the meeting	All faculty members
7	Energy Day celebration	14/12/2015	25 students participated in street play on energy conservation in 4 villages namely Mahad (2), Poladpur, Nate.	Dr. N. S. Lingayat
8	Industrial Visit	29/12/2015	Dahanu Thermal Power Station,	Dr. N. S. Lingayat

			Dahanu.	Prof. D. S. Shet
9	Industry Institute Joint Project	31/12/ 2015	EMBIO Ltd, Mahad, 08 Students have successfully completed A Project at EMBIO Ltd Mahad, on “ An Efficient Utilization of Electrical Energy in Medium Scale Chemical Industry: A Case Study”	Under Guidance of Dr. B. C.Kharbas andEngineer-ShivajiMande
10	Guest Lecture on MDController	28/01/2016	Mr. ShivajiMande, EMBIO, Mahad	Dr. N. S. Lingayat
11	3 day workshop on Employability skill Development	05/02/2016	Conducted by Swades Foundation, Lonere	Prof. U. A. Kharat Prof. D. S .Shet
12	Guest Lecture on Carrier guidance	06/04/2016	Mr. Ashish Sawant	Prof. D. S. Shet
13	Industrial Visit	13/04/2016	JNPT Uran.	Dr. N. S. Lingayat Prof. D. S. Shet
14	Poster Competition on Energy Conservation	13/01/2016	07 students of the Institute have participated.	Energy Club All Staff
<b>15</b>	<b>New facilities created</b>			
a)	LCD Multimedia projector	Sept 2015	Through CDTP Scheme	Dr. N. S. Lingayat
b)	Single Phase Multi-function meters for the energy analysis of the various appliances.	June 2015	Through MEDA Project	Dr. N. S. Lingayat
c)	Designed & Development of New set up Experiments along with Laboratory Manuals For subject Switchgear and Protection	January 2015-April 2016		Dr. B. C. Kharbas
d)	CRO	Sept 2015	Through Institute Funds	Prof.(Mrs) D. S. Shet
e)	Design and Fabrication of a model for conducting practical's (IDC)	January 2015-April 2016		Prof. D. S .Shet

## B. Students Achievements

1. A group of five students participated in the “Avishkar Project Exhibition -2016” organized by Zeal College of Engineering and Research, Pune on 10<sup>th</sup> March, 2016.
2. A group of three students participated in quiz competition organized during the “Mindspark” at COEP, Pune.
3. A group of three students participated in treasure hunt competition organized during the “Mindspark” at COEP, Pune.
4. A group of six students participated and secured First position in the “Energy Conservation Project Competition” during energy conservation week December 2015 held at DTPLS, Reliance Infrastructure Limited, Dahanu.
5. Two students secured first and third positions in the “Poster Presentation Competition” held on 13<sup>th</sup> January, 2016 at the institute in the “Energy Conservation” theme.
6. A group of twenty two students participated in the celebration of “Energy Conservation Day” held on 14<sup>th</sup> December, 2015 at the institute.
7. A group three students participated in the maze runner event held during the “Cynosure” in March 2016 at DBATU, Lonere.
8. A group two students participated in the CSI (Crime Scene Investigation) event held during the “Cynosure” in March 2016 at DBATU, Lonere.

9. A group of eight students have successfully completed A Project at EMBIO Ltd Mahad, on “An Efficient Utilization of Electrical Energy in Medium Scale Chemical Industry: A Case Study”.
10. A group of 9 Students successfully completed Electrical Energy Audit of Institute and hostels of the University and Institute.
11. A group of 3 students successfully completed Electrical Energy Audit of the village Panhalghar.
12. One group of the students successfully designed and fabricated an experimental set up for conducting the practicals of the subject Industrial Drives and Control.
13. Miss. Minal M. Patil worked as Hostel Secretary of Hostel Alaknanda. Her work has been appreciated.
14. Four Girls of the department won prizes in Poster making competition on “Food Wastages” organized by Alaknanda hostel.
15. Most of Electrical Engineering Girls worked as Committee members of various hostel activities
16. The department students actively participated in the various sport events and won various prizes during the annual sports festival.
17. The department students actively participated in the various cultural events and won various prizes during the annual cultural festival.

### **C. Faculty Achievements**

#### **Dr. N. S. Lingayat**

- Represented India and Presented a paper titled, “Training of the Deprived Rural Youth and Adivasi Women of Raigad District of Maharashtra State (India) for Self and Wage Employment” in the International Conference on TVET Skills Development for Poverty Alleviation, Entrepreneurship, and Employability, June 22-23, 2015, Manila, Philippines.
- Attended International Training Program on “Entrepreneurship in TVET skills development”, organized by Colombo Plan Staff College, Manila, Philippines in June 17-20, 2015.
- Successfully implemented the Energy Efficiency Project sponsored by MEDA. Electricity bill amount of Rs. 5.9 Lac has been saved in the year 2015-16.

The project has received following awards:

- A. 8<sup>th</sup> India Power Award by Council of Power Utilities, New Delhi on Nov 6, 2015.
- B. 10<sup>th</sup> Energy Conservation Award by Maharashtra Energy Development Agency Pune, Government of Maharashtra, on February 18, 2016.
- C. Reliance Infrastructure, Dahanu.
- Attended one week training program on, “Management of CDTP Scheme for Maharashtra State” at NITTTR Bhopal Extension Center, Pune in June 8-12, 2015.
- Successful Implementation of CDTP Scheme: Conducted various skill based training programs for the rural deprived youth of the Raigad district and trained around 737 rural youths in this financial year 2015-16. Successfully carried out other activities of the CDTP scheme.
- Successfully completed practical project of Energy Audit of IoPE campus, boys and girls hostels of the University, and the village ‘Panhalghar’ through the final year students of Electrical Engineering.
- Worked as a reviewer for the reputed International Journals.
- Ph. D supervisor of Pacific University, Udaipur and Dr. Babasaheb Ambedkar Technological University, Lonere.
- Evaluated M. E. Thesis of J. N. Vyas University, Jodhpur and conducted viva-voce examination on March 31, 2015.
- Carried out the Electrical Maintenance Activities of the Institute and Hostel Alaknanda.
- Celebrated Energy Conservation Day on 14<sup>th</sup> December 2015. Final year students performed street play on Energy Conservation at two locations of the village Mahad, village Poladpur and Nate. The Maharashtra State Electricity Distribution Company Ltd. (MSEDCL) sold LED bulb to the villagers at the discounted prize.
- Arranged Industrial Visit of the Students at Dahanu Thermal Power Station Dahanu.
- Worked as a judge in “IGNITE” on 5<sup>th</sup> March, 2016 held at DBATU, Lonere.
- Shouldered other responsibility given by Dr. B.A. T. U. Lonere and the Institute time to time.
- Worked as a member of the Admission Committee for direct second year diploma admissions.

- Life Member of
  - A. Institution of Engineers (I)
  - B. Indian Society for Technical Education
  - C. International Association of Engineers

### **Dr. B. C. Kharbas**

- Research work, Title: “Some Investigation on Transmission Cost Allocations and Enhanced Revenue Reconciliation in Open Access of Transmission Network” Stream: Transmission Pricing (Electrical Power Systems)
- The research work was got at national level for presentation in “Power System POSOCO Award 2016 (PPSA 16).” He presented his research work at PGCIL New Delhi on February22, 2016.
- Member IEEE USA.
- Ph. D supervisor of Dr. Babasaheb Ambedkar Technological University.
- Reviewer of SCI ranked Electrical Engineering International Journals (Electrical Power Components and Systems, American Journal of Electrical and Power Engineering, Electrical Power Research, Energy Technology and Policy)
- Editor of American Journal of Electrical and Power Engineering
- Worked as a resource person for one week STTP on “Recent Trends in Energy Research” from 7<sup>th</sup>-11<sup>th</sup> December, 2015 at DBATU, Lonere.
- Working as Rector Hostel Alknanda of the University. Developed and maintained entire transparent and students managed mess and hostel activities. This finally resulted in huge reduction in the expenses in mess and hostel expenditure.
- Added multiple facilities in the Hostel Alknanda like CCTV, Vending Machines, Mess Utensils, and Maintenance work of Hostel.
- Adopted process of write off of old and damaged items in the hostel. Dead stock verification etc.
- Arranged various competitions like poster making on “Food Wastages”, Elocution Competitions etc. for students residing in the Hostel.
- Continuously taking follow up of doing maintenance of Hostel Buildings and Other Facilities with Authorities.
- Worked as Member of Dr. Babasaheb Ambedkar 125<sup>th</sup> Birthday Celebration Programme Committee.
- Worked in various activities of Institute and University like, Jayanti Program Celebrations as per government resolution, member of various activities of university.
- Worked for admission activities of Institute.
- Worked as a judge in “IGNITE” on 5<sup>th</sup> March, 2016 held at DBATU, Lonere.

### **Prof. U. A. Kharat**

- Assisted in conduction of Poster Presentation Competition on the occasion of energy conservation day.
- Coordinated a group of students to present the project at the DTPS, Reliance Infrastructure Limited, Dahanu.
- Class teacher of the current first year electrical engineering class.
- Worked in the first year and the direct second year admission process.
- Worked as a marshal for the convocation.
- Worked in a committee of the Ambedkar Jayanti celebration.

### **Prof. (Mrs.) D. S. Shet**

- Worked as a Secretary of Alumni Institute of IoPE. Highest number of Lifetime membership (30) of IoPE Alumni Institute by the Electrical Alumni.
- Procured I-card printing machinery and printed Identity cards of all the first year students and new faculty members through the Alumni Institute.
- Actively involved in academic and other activities of the Institute and University.

- Working as Assistant Rector of hostel Dhavalgiri of the University and significantly contributed in the regular and development activities of the Hostel.
- Major contribution in record keeping/data uploading/students activities and academic activities of the department.
- Shouldered other responsibility given by Dr. B.A. T. U. Lonere and the Institute time to time.
- Worked as a member of the Admission Committee for the second/third year diploma admissions.
- Active part in organizing Women's Day for all the girls of the Institute.

### **Result Analysis**

YEAR	TOTAL STUDENT APPEARED FOR EXAM	TOTAL STUDENT PASSED	PERCENTAGE OF PASSING RESULT (%)
FIRST YEAR	64	29	45
SECOND YEAR	70	31	45.28
THIRD YEAR	59	51	86.4

### **IMPORTANT PHOTOGRAPHS**

Participation certificate of Dr. N. S. Lingayat in regional program on "Entrepreneurship in TVET skills development", organised by Colombo Plan Staff College, Manila, Philippines in June 2015.



Country Presentation Certificate at the International Conference on "TVET Skills Development for Poverty Alleviation" organised by Colombo Plan Staff College, Manila, Philippines in June 2015.



### IMPLEMENTATION OF ENERGY EFFICIENCY PILOT PROJECT SOPNSORED BY MAHARASHTRA ENERGY DEVELOPMENT AGENCY



This Energy Conservation Project Received 8<sup>th</sup> India Power Award by Council of Power Utilities, N. Delhi under the category, "Dedicated Program for Energy Conservation" on 6<sup>th</sup> November 2015 Dr. N. S. Lingayat, Project Co-ordinator received the award.



Certificate of 10<sup>th</sup> State Level Energy Conservation Award (II Prize in Govt. Building Category) Dr. N. S. Lingayat, Project Co-ordinator received the award

### Industrial Visit of Final Year Students to JNPT URAN on 13/04/2016



PCB workshop on 23/10/2015



Industrial Visit Dahanu Thermal Power Station 29-12-2015

## **Department: Information Technology**

Department has been started in the year-2001 Departmental Intake- 60

1. Courses Offered:Diploma in Information Technology
2. **Faculty Members:**

Name	Designation	Academic Qualification	Specialization	Areas of Interest
Mr.S.M.Gaikwad	Dept in-charge	B.E. M.Tech.	Electronics Engg	Image Processing, Neural Network.
Mr.S.S.Gandhi	Lecturer (contract Basis)	B.E. M.Tech.	Computer Engg	Software architecture, software engineering
Mr.G.P.Lad	Lecturer (contract Basis)	B.E. M.Tech.	Computer Engg	Software architecture, software engineering
Mr.P.M.Hanpude	Lecturer (contract Basis)	B.E. M.Tech.	Computer Engg	Networking, Cloud Computing.
Mr.S.S.Umbarkar	Lecturer	B.E. M.Tech.	Computer Engg	Data mining, NLP

### **3. List of major equipment and other facilities:**

Sr. No.	Name of Major Equipment/Facility	Cost(In Rs.)
01	Programming Lab-Desktop HP DX 7200(25 No)	10,87,500/-
02	OnlineUPSsystem,aplab make 5kVA , Battery -ES 18/12 battery stand 2/8 CB with links set, Transformer(inbuilt)	1,36,500/-

### **4. Conference/Workshops/Training/Academic Awareness activities conducted:**

- a)Conducted workshop for Third Year student on“Employability Skills Development “ during 5<sup>th</sup> Feb 2016 to 7<sup>th</sup>feb 2016.
- b) Organized Technical Poster Exhibition on Digital India theme (15<sup>th</sup> Sep 2015).
- c) Organized Industrial tourto Airtel BPO Swadesh foundation Lonere on 16 Jan 2016. .
- d)Organized two daysworkshop on PHP.

### **RESULT ANALYSIS**

YEAR	TOTAL STUDENT APPEARED	TOTAL STUDENT PASSED	PERCENTAGE OF PASSING RESULT (%)
FIRST YEAR	66	56	84.84
SECOND YEAR	54	48	88.88
THIRD YEAR	57	57	100

### **5.Academic Achievements of faculty (Awards received, lectures delivered, etc.):**

1. Prof.S.S.Gandhi received Gold Medal in M.Tech (Computer Engg) from Dr.BabasahebAmbedkar Technological University,Lonere.
2. Prof.S.S.Gandhi received M.Tech degree in Computer Engg. fromDr.BabasahebAmbedkar Technological University,Lonere.
3. Prof. P. M. Hanpude received M.Tech degree in Computer Engg. fromDr.BabasahebAmbedkar Technological University,Lonere.
4. Prof. G. P. Lad received M.Tech degree in Computer Engg. fromDr.BabasahebAmbedkar Technological University,Lonere.
5. Prof. S.S. Umbarkar received M.E. degree in Computer Engg from SavitribaiPhule, Pune University.

#### **6. Major Students' Achievements –**

1. Omkar Telange and Dhiraj Andhere participated in Quiz competition held at Thakur Polytechnic Mumbai.
2. Samikshya Shirshivkar achieved silver medal in Solo Dance Competition in annual gathering 2015-2016.
3. Siddhesh Surve and Group achieved gold medal in Group Dance competition in annual gathering 2015-2016.

#### **Departmental Activities organized:**

##### **Engineers' Day & Poster Exhibition**

Department level Technical Poster exhibition was organised on the occasion of Engineers' day(15 Sept, 2015). Around 30 students participated & presented poster in the exhibition on topics like Digital locker, National Scholarships Portal. The program presided over by Principal of institute Dr.M.A.Dabhade with very informative & encouraging speech on Bharat Ratna Mokshagundam Visvesvaraya.



**Engineers' Day Celebration & Poster Exhibition**

#### **Industrial tour at Airtel BPO, Lonere**

Students from Department of Information Technology visited Airtel BPO, founded by Swades Foundation which aims to develop rural areas. The purpose of this visit was to understand backbone of any industry. In this visit, students learnt the course such as Computer Networks and Communication Skills. The one day visit was organized on 16th January, 2016 at 10.30 AM. Near about 100 students (2nd and 3rd Year students) participated in the visit. Departmental faculties (Prof. S. M. Gaikwad, Miss. S. S. Umbarkar, Mr. P. M. Hanpude, Mr. G. P. Lad, and Mr. S. S. Gandhi) also were part of above visit.

#### **Workshop on Employability Skills Development**

Three days Workshop organised for Third Year student on “Employability Skills Development” during 5<sup>th</sup> Feb 2016 to 7<sup>th</sup> Feb 2016. Ms. Sanjana Munj Trainer of FUEL Team, Swades Foundation guiding the student to make them eligible to apply for a job.

#### **Ignite, Students Events –**

Every year student association of department “Ignite” plan different event under Cultural, Literature & Sports activity. In this academic year different literary and technical events were organised and winners are awarded with certificate & medals.



## **Department of Chemical Engineering**

- 1. Year of inception – 1982** Intake – 60
  - 2. Courses offered:** 1. Diploma in Chemical Engineering ,  
2. Advanced Diploma in Water Quality Management

Chemical Engineering department was established in the year 1982. This was first department established in IoPE. Department completed 25 years in 2007 & 3 days silver jubilee function was held in Dec 2007. Total student intake is now 63 students.

### **3. Faculty Members:**

Name	Designation	Academic Qualification	Specialization	Areas of interest
Dr M A Dabhade	Principal	Ph D (Chemical Engg)	Biochemical Engg	Heat Transfer, Chemical reaction Engg, Mass Transfer, Water Treatment
Shri.R.S.Kulkarni	Lecturer (SL Grade)	B.Tech.	Chemical Engineering	Chemical Process Calculations, process inst. & control
Shri Y Y Karkare	Lecturer	M Tech	Chemical Engineering	Heat Transfer, Reactive Distillation

#### **4. List of major equipment and other facilities:**

Sr.No.	Name of major equipments/ facility	Cost (> Rs. 1,00,000/- )
1	UPS 6 KVA	1,12,000
2	Gas Chromatograph – Netel make	4,40,000

## **5 Conferences/Workshops/Trainings/Academic Awareness activities conducted:**

- a. Celebrated Teachers Day on 5<sup>th</sup> September, 2015 by SAChe (Students Association of Chemical Engineering) to honor and respect teachers of the department. Also conducted Essay competition for students.
  - b. Celebrated World Water Day – 2016 on 22<sup>nd</sup> March, 2016 to make students aware about water conservation
  - c. Diploma level Paper presentation competition was held on 22<sup>nd</sup> March, 2016
  - d. Sache conducted various competitions such as chess, carom for students and prizes were distributed.
  - e. Conducted Alumni meet for Diploma & ADWOM students on 22 March 2015

#### **6. Academic Achievements of faculty: (Awards received, lectures delivered, etc.)**

- (a) Prof Y Y Karkare attended two weeks program on Matlab & Simulation at Govt. College of Engg., Karad in June 2016
  - (b) Two experimental setups viz Double pipe heat exchanger & Shell & Tube heat exchanger were repaired under project.
  - (c) New experimental setup on Losses of pipes is fabricated.

#### **7. Major Students' Achievements (GATE, GRE, GMAT, papers published, etc) -**

- (a) Students participated in paper presentation competition at our institute & won second prize
  - (b) Students went for paper presentation in Nagothane polytechnic & won second prize.
  - (c) Department won silver medal and Gold medal in musical skit and silver medal in one act play event in University annual gathering ‘ Abhiyanta Vasant – 2016’
  - (d) Two students won prizes in National level NCC camp

### Campus Interviews held and placement details

S.N.	Name of Company	Placements	Package
<b>Chemical Engineering</b>			
01	Gharda Chemicals Ltd; Chiplun-Ratnagiri	03	Rs. 1.6 Lakh per annum
02	Privi Organics, Mahad, Dist Raigad	03	Rs. 1.4 Lakh per annum
03	Pidilite ind, Mahad	02	Rs. 1.4 Lakh per annum
04	Dipik Nitrite, Lote MIDC	04	Rs. 1.4 Lakh per annum
05	Sandoz pvt Ltd., Mahad	02	Rs. 1.4 Lakh per annum
<b>Advanced Diploma in Water Quality Management</b>			
01	Wipro Waters Ltd., Mumbai	08	Rs. 1.8 Lakhs+ other allowances
02	Aguapuro Pvt Ltd., Mumbai	12	Rs. 1.2 Lakhs+ other allowances
03	Pepsico, Roha	04	Rs. 1.2 Lakhs+ other allowances
04	PBS Water systems Pvt Ltd, Navi Mumbai	04	Rs. 1.2 Lakhs+ Other allowances

### Result Analysis for Diploma in Chemical Engg June 2016 (After results of Remedial Exam in July 2016)

	First Year	Second Year	Third Year
No. of Students	63	62	59
Passed in First Class with Distinction ( $\geq 7.0$ GPA)	4	5	23
Passed in First Class GPA = 6.5 to <7.0	3	3	3
Passed in Second Class GPA = 5.0 to < 6.5	8	9	10
Passed in Pass Class GPA < 5.0	20	30	15
Passed in ATKT (credits $\geq 60$ && $<90$ )	20	12	05
Fails (Credits < 60)	3	03	03
% of Result	55.55	75.80	86.4

\* \* \*

### Instrumentation Engg. Department

#### Departmental Activities:

Sr. No.	Activity	Date	Remarks	Coordinator
1.	New facilities created: <ul style="list-style-type: none"> <li>LCD Multimedia</li> <li>Additional Lab</li> <li>Introduction of supplementary classes</li> </ul>	March 2016 April 2016 Dec. 2016		D. S. Karanjkar D. S. Karanjkar/S. G. Karad
2.	Industrial visit at Privi Organics, Mahad	15 March 2016		S. G. Hingmire S. G. Karad

3.	Expert Lecture on :Automation & Safety	05 March 2016	By Mr. Prasad Salagare, Project Engineer, Rockwell Automation, Pune. All final year students attended.	S. G. Karad
4.	Campus Interview by Godrej & Boyce, Vikhroli, Mumbai	3 March 2016	3 Students selected. Rs. 16000/- salary for one year, and Rs. 20000/- after one year	D. S. Karanjkar
5.	Seminar on : KEEP MOVING: Motivational lecture series	26 Feb. 2016	By Mr. Naren Goidhani, Founder Life school, Pune, All final year students attended.	IOPE
6.	Expert Lecture on : Industrial automation	10 Feb. 2016	By Mr. Sachin Kadam, Entrepreneur, Pune	Mrs.S.S.Swami
7.	3 Days Workshop conduct on :Employability Skill Development	05 Feb. 2016	By Swadesh Foundation, Raigad	S. G. Hingmire
8.	Seminar on :Employability through Foreign languages	13 Jan. 2016	Final year students participated.	S. G. Karad
9.	MOU	02 Jan. 2016	Between Instru. Dept of IOPE & Instru. Dept of MPCOE, Velneshwar, Guhagar	D. S. Karanjkar S. G. Hingmire
10.	One day Workshop on : DCS	02 Jan. 2016	133 students participated, 50 students from other Institutes	S. G. Hingmire
11.	Syllabus Revised	Dec 2015		D. S. Karanjkar/ All other faculty
12.	Vigilance week Programme	26- 31 Oct. 2015	Essay, Speech, Poster Competition	S. G. Karad Mrs.S.S.Swami
13.	Parent's Meet	30 Oct. 2015	50 Parent's were attended	S. G. Hingmire Mrs. S.S.Swami
14.	Educational visit	19 Oct. 2015	Walawalkar Hospital, Dervan, all Final year students participated	S. G. Hingmire Mrs. S. S. Swami
15.	Engineer's Day Celebration	15 Sept. 2015	Talk By Mr. Keshav Jahagirdar, Owner, ACE Automation, Pune	D. S. Karanjkar Mrs.S.S.Swami
16.	One day Workshop on : PLC	21 Aug. 2015	125 students participated, 40 students from other Institutes	D. S. Karanjkar
17.	Expert lecture on DCS	17 Apr. 2015	Lecture by Amey Kathe, Emerson Process Management, Mumbai.	D. S. Karanjkar Mrs.S.S.Swami

18.	Expert Lecture on : Microcontrollers	27 Feb. 2015	By Uzair Deshmukh, Sr. Service Engg. Honeywell, UAE	S. G. Karad Mrs. S. S. Swami
19.	Departmental Alumni meet	31 Jan. 2015	90 Alumni (from 1998 batch onwards) attended the function.	D. S. Karanjkar/All faculty
20.	Expert Lecture on : Industrial automation	7 Jan 2015	By Mr. Keshav Jahagirdar, ACE Automation, Pune	D. S. Karanjkar

**Result analysis:**

YEAR	TOTAL STUDENT APPEARED FOR EXAM	TOTAL STUDENT PASSED	PERCENTAGE OF PASSING RESULT (%)
FIRST YEAR	63	23	36.50
SECOND YEAR	65	34	52.30
THIRD YEAR	63	46	73.00

**Students' Achievements:**

Sr. No.	Activity	Date	Remark
1.	Campus selection at Godrej	Mar. 2016	1. Sandesh Bhadavkar. 2. Harshal Davate. 3. Roshan Jadhav .
2.	TECH FEST 2K16 Event, MPCOE, Velneshwar	11-12 March 2016	15 students participated.
3.	Cynosure 2K16, 1 <sup>st</sup> Prize in Structura event, DBATU, Lonere	5 March 2016	Group of 3 students participated, Akshay Waghe, Harshad Karkare. Vikas Mane
4.	Sourabh Khamgaonkar	March 2016	1 <sup>st</sup> prize in District level Essay competition
5.	Interaction with Dr. Anil Kakodkar, at MPCOE, Velneshwar	12 Jan.2016	5 students attended
6.	1. Akshay Waghe 2. Vikas Mane 3. Harshal Karkare	Synosure-2016	1 <sup>st</sup> prize of synosure structura at Dr.BATU, Lonere
7.	Cultural Events:-Dance / Solo	Abhiyanta Vasant-2016	Amruta Pawar-Gold medal
8.	Duet Dance	Abhiyanta Vasant -2016	1.Amruta Pawar-Gold medal 2.Kajal Pansare- Gold medal
9.	Group Dance	Abhiyanta Vasant -2016	1.Amruta Pawar-Gold medal 2.Kajal Pansare- Gold medal 3.Ankita Salaskar- Gold medal
10.	Singing(Group)	Abhiyanta Vasant -2016	1.Sandesh Bhadavkar- Gold medal 2.Harshal Davate- Gold medal 3.Vikrant Mohite- Gold medal
11.	Outdoor:-Volley Ball	Abhiyaan-2016	Amol Sanap and group(20 boys)- Gold medal
12.	Outdoor:-KhoKho	Abhiyaan-2016	Sunil Sumbhe and group T.Y-Gold medal Lukesh Metha and group S.Y- Silver Medal

13.	Outdoor:- Cricket	Abhiyaan-2016	F.Y. students (20 boys)- Gold Medal
14.	Outdoor:- Football	Abhiyaan-2016	F.Y. students (10 boys)- Silver Medal
15.	Indoor:- Carrom(Single)	Abhiyaan-2016	Mayur Khatavkar- Gold Medal
16.	Indoor:- Carrom(Double)	Abhiyaan-2016	Mayur Khatavkar & Ritesh Chandorkar- Silver Medal
17.	Indoor:- Carrom(Single)	Abhiyaan-2016	Amruta Gaikwad- Gold Medal
18.	Indoor:- Carrom(Double)	Abhiyaan-2016	Amruta Pawar & Amruta Gaikwad- Gold Medal
19.	Mindspark 2K15 event, COEP, Pune	Sept. 2015	2 students participated.

#### **Faculty Achievements:**

Sr. No.	Activity
1.	Dr. D. S. Karanjkar, Completed PhD in Solar Photovoltaic MPPT controller from Panjab University , Chandigarh in Sept. 2015
2.	Dr. D. S. Karanjkar, participated in Two one week STC's
3.	Prof. S. G. Hingmire worked as a reviewer in IEEE conference ICIC 2015 at COEP, Pune.
4.	Expert Lecture on Control System delivered by Prof. S. G. Hingmire at VIT, Sajjangad, Satara.
5.	Prof. S. G. Karad, participated in Three one week STC's
6.	Prof. S. S. Swami, participated in One week (2)STC's & one week (1) STC
7.	Dr. D. S. Karanjkar was present as a Chief guest for Two days Virtual Lab Workshop, at MPCOE, Velneshwar
8.	Prof. S. G. Karad & Prof. S. S. Swami participated in Two days Virtual Lab Workshop, at MPCOE, Velneshwar
9.	All faculty attended 1 Day workshop on Happy minds in 30 Jan. 2016

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## **Department of Electronics & Telecommunication Engg.**

The Department is established in the year 1995 with intake of 40 and then it is raised to 60 from 2008. Department has been accredited in 2005 by N.B.A., New Delhi for Three years. The Department is having immensely motivated & highly qualified faculty members with various specializations in adequate numbers on a regular appointment. Department is furnished with advanced teaching aids like LCD projector, Overhead projector, Instructional charts etc.

#### **Courses Offered: Diploma in Electronics & Telecommunicaton Engg.**

#### **Faculty Members:**

Name	Designation	Academic Qualification	Specialisation	Areas of Interest
Dr.D.G.Jadhav	Head of Department	M.E.(Electronics Engg.), Ph.D	Electronics Engg	Signal Processing
Prof.M.P.Bhagat	SL. Gr Lecturer	M.E.(Electronics Engg.)	Electronics Engg	Electronics Engg
Prof.A.M.Kulkarni	Lecturer	M.Tech (Communicaton Engg)	Communication Engg	Error Control Coding
Prof.H.H.Patil	Lecturer	B.E.(Electronics Engg)	Electronics Engg	Electronics Engg
Prof.S.M.Gaikwad	Lecturer	M.E. ( Electronics Engg)	Electronics Engg	Electronics Engg

Prof.A.J.Naik	Lecturer	M.Tech(Electronics & Telecom. Engg)	Electronics & Telecom. Engg	Antenna
Prof.L.D.Narote	Lecturer	M.E. ( Electronics Engg)	Electronics Engg	Electronics Engg

#### **4.List of major equipment and other facilities:**

Sr. No.	Name of Major Equipment/Facility	Cost (>Rs. 1,00,000/-)
1	Microwave Test Bench NT9000	94669/-
2	Microwave Test Bench NT9001	102238/-
3	Antenna Trainer	108646/-
4	Computer Simulation Lab(HP PRO 2090, 15NOs.)	465000/-

#### **5.Conferences/Workshops/Trainings/Academic Awareness activities conducted:**

- a) Organised Industrial Visit to All India Radio, Ratnagiri on 03/03/2016 of second year students.
- b) Planned Industrial Visit to HPT Doordarshan, Aurangabad during first week of April 2016 of third year students.
- c) University Network Engineer's Expert Lecture is planned on "Internet Network Systems" during last week of March 2016.
- d) Prof.A.M.Kulkarni presented paper entitled "Performance Analysis of DFT-OFDM and Wavelet based OFDM system" at National Conference organized by Finolex Academy of Management and Technology, Ratnagiri on 17-18<sup>th</sup> February 2016.
- e) Prof.H.H.Patil presented paper entitled "Design of H-Fractal Antenna for multiband applications" at National Conference organized by Finolex Academy of Management and Technology, Ratnagiri on 17-18<sup>th</sup> February 2016.
- f) Six faculty members of department participated in one week workshop on "Recent Trends in Energy Research" at DBATU lonere on 7-11 December 2015.
- g) Four faculty members of department participated in three day training programme on "Practical Electromagnetics for Modern Antennas,RF and Microwave Designs using ANSYS HFSS" at DBATU lonere on 25-27 September 2015.
- h) Dr.D.G.Jadhav participated in one week workshop on "Institutional Preparation for Accreditation and Academic Audit" at NITTTR extension center Pune on 1-5 February 2016.
- i) Department conducted one day workshop on "Stress Management" on 30<sup>th</sup> January 2016.
- j) Prof.A.M.Kulkarni of department is participating in one week workshop on "MATLAB and its applications" at NITTTR,Chandigarh on 7-11 March 2016.
- k) Prof.A.J.Naik of department is participating in two week workshop on "Induction Phase-II" at NITTTR extension center Pune on 7-18 March 2016.

#### **6. Publications:**

- a) Prof.A.M.Kulkarni published paper entitled "Performance Analysis of DFT-OFDM and Wavelet based OFDM system" in Asian Journal of Convergence in Technology 2016.
- b) Prof.H.H.Patil published paper entitled "Design of H-Fractal Antenna for multiband applications" in Asian Journal of Convergence in Technology 2016.

#### **7. Academic Achievements of faculty:**

Prof.D.G.Jadhav completed Ph.D in Electronics & Communication Engg. From Panjab University,Chandigarh.

## **8. Result analysis:**

### **Electronics and Telecommunication Engineering Department**

Sr. No.	Class	Total Students	Passed Students	Passing Percentage
01	First Year	64	30	46.87%
02	Second Year	67	41	61.19%
03	Third Year	59	51	86.44%

\* \* \*

### **Department Polymer and Plastic Engineering**

- 1) Department students also organized the routine department programs like Farewell for passing and fresher program for newly admitted students. The department also celebrated the Engineer's Day on 15<sup>th</sup> September and Teacher's day on 5<sup>th</sup> September. Department also conducted swatcha Bharat program.
- 2) Department is successful in providing the industrial jobs to students who shown their willingness for it. M/s Positive Packaging Pvt. Ltd., Khapoli visited the institute for campus placements and selected 9 students, including 3 girls. The department is also arranging an Industrial visit of the M/s Positive Packaging and M/s Sempertrans Nirlons Pvt. Ltd. Both companies are multi-national and market leaders in their field.
- 3) Department started an internal library facility to benefit the students last year and successfully running to it. Any department student can directly approach to the department for issue of available books. These books were received from our University Library as they have kept these for disposal. The department is also planning to conduct a three day workshop on "Employability Skill Development" for final year and pass out students via collaboration with SWADESH Foundation.
- 4) The department also successfully organized its first Alumni meet on 18<sup>th</sup> April 2015. Nearly 75 alumni attended the meet which started on 11:30 AM and closed on 04:30 PM with felicitation to all our distinguished alumni. The alumni response was fantastic and its need was felt by all alumni and our present students.
- 5) The department also provided a Whats'app platform naming "Polymers Engineers Memory" for interaction with our alumni. The alumni and our present students, all are getting benefit out of it.

#### **Staff Activities:**

- 1) All department faculty members utilized their winter vacation by attending STTP on Recent Trends in Energy Research (under TEQIP) from 07/12/2015 to 11/12/2015 at Dr. BATU Lonere.
- 2) All department faculty members also participated in one day workshop on "Stress Management at I.o.P.E on 30/01/2016.
- 3) Prof. SA Dawale attended his induction phase II from 16/03/2016 to 27/03/2016 at NITTTR Bhopal and also attended STTP on N.I.C.E. under TEQIP from 18/05/2015 to 22/05/2015 at Dr.BATU Lonere.
- 4) Prof. RA Pardeshi has been Conferred ME (Plastic Engg) Degree from ICT, (Mumbai) with AB Grade (9) on 3rd March 2016.
- 5) Prof. SA Dawale acted as course expert lecturer in Government Polytechnic, Nashik for Curriculum Development.
- 6) Prof RA Pardeshi Participated and presented his technical Paper title "Natural fiber Composite : A review" at 2nd National conference on Recent Advances in Science and Technology, Finolex Acadamy of Management and Technology, Ratnagiri from 17/02/2016 to 18/02/2016. He also attended 2 days workshop on "Virtual Lab" organized by COEP, Pune and Velneshwar College, Guhagar.
- 7) Prof. RA Pardeshi completed one week training Programme on "Institutional preparation for Accreditation and Academic audit" at NITTTR extension center, Pune from 1st to 5th February 2016.



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प्रकरण ३

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## आर्थिक बाबी

३.१ शुल्क रचना

३.२ आर्थिक ताळेबंद



**प्रकरण ३**  
**आर्थिक बाबी**

**३.१ शुल्क रचना**

Fees for all courses are charged according to the rules framed by the Government of Maharashtra from time to time. The postgraduate courses are run on non-grant basis, the structure of fees is given in the succeeding section as approved by the University.

	<b>Year of Admission</b>
A) Tuition Fees	Rs. 15,000.00
B) Development Fund	Rs. 21,065.00
C) Other Fees:	
1) Gymkhana Fees	Rs. 880.00
2) Training & Placement Fees	Rs. 550.00
3) Library Fees	Rs. 4400.00
4) Internet & E-mail facilities Fees	Rs. 2761.00
6) Annual Social Gathering & Other Cultural Activities Fees	Rs. 880.00
6) Laboratory Fees	Rs. 5500.00
D) University Fees :	
1) Students Aid Fund	Rs. 300.00
2) Enrolment Fees	Rs. 000.00
3) Examination Fees	Rs. 1600.00
4) Gymnasium Fees	Rs. 100.00
5) Ashwamedh & Indradhanushya Fees	Rs. 30.00
6) N.S.S Fees	Rs. 10.00
7) Aptkalin Needhi	Rs. 10.00
8) Networking Fees	Rs. 500.00
9) MIS Fees	Rs. 100.00
Total Fees	Rs. 53,686.00

### **3.2 Balance Sheet:**

**Dr. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE- 402 103**  
TAL. - MANGAON, DIST. - RAIGAD

(GOVERNMENT & NON-GOVERNMENT EXCEPT M.TECH)

BALANCE SHEET AS ON 31ST MARCH 2016

LIABILITIES	Sch.	AMOUNT Rs.	ASSETS	Sch.	AMOUNT Rs.
Non-Recurring Grant	1	1,114,073,455	Fixed Assets	5	367,649,511
Funds	2	225,174,123	Investments	6	455,329.415
Deposits	3	7,040,725	Current Assets	7	195,028,113
Current Liabilities	4	77,491,081	Income & Expenditure 419007127.68 -13234782.25		405,772,345
<b>Total Rs.</b>		<b>1,423,779,384</b>	<b>Total Rs.</b>		<b>1,423,779,384</b>

AS PER MY REPORT OF EVEN DATE

S S S AM & CO  
CHARTERED ACCOUNTANTS  
Place : Pune  
Date : 29/06/2016

FINANCE OFFICER  
Dr. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,  
LONERE - 402 103

**Dr. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE- 402 103**  
**TAL. - MANGAON, DIST. - RAIGAD**

(GOVERNMENT & NON-GOVERNMENT EXCEPT M.TECH)

**INCOME & EXPENDITURE FOR THE YEAR ENDED ON 31ST MARCH 2016**

EXPENDITURE	AMOUNT	INCOME	AMOUNT
SALARY & WAGES	164,082,354	ADMISSION FEE	38,60,916
DEPRECIATION	53,695,972	ALUMNI ASSOCIATION FEES	67,900
VECHICLE MAINTENANCE	386,205	ANNUAL SOCIAL GATHERING FEES	11,45,525
ADVERTISEMENT	479,543	APTKALIN NEEDHI	26,225
AUDIT EXPENSES	162,732	ARC 04 CAP ROUND PROCESSING FEE	14,850
AVHAN	11,208	ASHWAMEDH & INDRADANUSHYA FEE	20,460
AVISHKAR	34,518	AVISHKAR FEES	57,795
BANK CHARGES A/C	9,240	CONSULTANCY CHARGES	2,40,344
CYNOSURE	124,833	CONVOCATION FEES	6,89,700
ELECTRICITY CHARGES	5,029,525	DEVELOPMENT FEES	21,600
EXAMINATION EXP.	1,341,381	ENROLMENT FEES	1,35,700
GARDENING EXP.	9,558	GYMKHANA FEES	15,38,631
GATHERING EXP	4,208	GYMNASIUM FEES	2,55,100
HONORIRIUM	3,055	HOSTEL FEES	44,05,857
HOSTEL MAINTENANCE	14,000	HOSTEL FORM FEE	35,360
INDEPENDENCE DAY	35,062	INTERNET & E-MAIL FACILITIES FEES	41,20,363
ISO 9001:2008	5,21,360	LABORATORY FEES	82,37,647
LABORATORY EXP.	5,000	LATE FEES	72,621
MAINTENANCE OF BUILDING	21,21,207	LIBRARY FEES	64,92,195
MATERIAL & SUPPLIERS	35,44,159	LICENCE FEES	10,17,446
NCC EXP.	32,500	MIS FEES	2,60,279
NETWORKING EXP.	5,000	NETWORKING FEES	14,10,500
NEWS PAPER & MAGAZINE	143,514	N S.S. FEFS	25,550
NSS EXPENSES	110,761	OTHER FEES	1,31,78,800
OFFICE EXPENSES	207,214	PAYABLE TO STUDENT	36,058
POSTAGE	20,000	REGISTRATION FEES	500
PP & SS	56,48,399	STUDENT AID FUND	7,82,550
PRINTING & STATIONERY	18,58,988	TRAINING & PLACEMENT FEES	8,37,117
REMUNERATION	31,22,670	TUITION FEES	2,56,20,000
SEMINAR EXP.	27,531	WATER CHARGES	5,31,399
SHIVJAYANTI EXP.	2,68,000	EXAMINATION FEES	92,62,228
STUDENT ACTIVITES	66,957	CONTRACT BASIS	1,29,950
STUDENTS PRIZES	46,052	GUEST HOUSE RENT	3,45,025
TELEPHONE CHARGES	98,717	I CARD	1,46,200
TRAINING & PLACEMENT	42,964	INTEREST ON SAVING BANK A/C	21,61,403
TRANSPORTATION CHARGES	11,500	INTEREST ON TDR	3,12,32,579
TRAVELLING EXP.	14,656	LAND RENT	9,000
UNIVERSITY FOUNDATION DAY	43,814	LIBRARY COLLECTION	17,918
UNIVERSITY MEMBER SHIP FEE	1,00,005	MISCELLANEOUS INCOME	2,19,378
VEHICLE INSURANCE	1,12,050	MKCL DIVIDEND	50,000
EXCESS OF INCOME OVER EXPENDITURE	1,32,34,782	NSS GRANT	89,203
		PH. D. RETENTION FEES	20,000
		SERVICES CHARGES	65,500
		STATE GOVT GRANT SALARY	14,05,40,000
		TENDER FORM FEES	32,445
		UTI DIVIDEND	28,471
<b>TOTAL</b>	<b>25,89,77,900</b>	<b>TOTAL</b>	<b>25,89,77,900</b>

**Dr. B.A.T.U. M Tech - 2015-2016**

Lonere

**Balance Sheet**

1 - Apr. - 2015 to 31 - Mar. - 2016

<b>Liabilities</b>	<b>Schedule</b>	<b>as at 31-Mar-2016</b>	<b>Assets</b>	<b>Schedule</b>	<b>as at 31-Mar-2016</b>
Income & Expenditure	1	6,30,77,065	Fixed Assets	5	12,10,321
Funds	2	87,600	Investment	6	2,76,66,305
Deposits	3	2,81,495	Current Assets	7	4,32,79,366
Current Liabilities	4	87,09,832			
	<b>TOTAL</b>	<b>7,21,55,992</b>		<b>TOTAL</b>	<b>7,21,55,992</b>

AS PER MY REPORT OF EVEN DATE

S S S AM & CO  
CHARTERED ACCOUNTANTS  
Place : Pune  
Date : 29/06/2016

FINANCE OFFICER  
Dr. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,  
LONERE - 402 103

**Dr. B.A.T.U. M Tech -2015-2016**

Lonere

**Income and Expenditure Account**

1 - Apr. - 2015 to 31 - Mar. - 2016

Particulars	Dr. B.A.T.U. M Tech - (From 1 - Apr. - 2015 to 31 - Mar. - 2016)		Dr. B.A.T.U. M Tech (From 1-Apr. - 2015 to 31-Mar. - 2016)
	Particulars	Direct Incomes	
Indirect Expenses		2270975.00	2973964.00
Bank Charges	172.00	Apakalain Needhi	15700.00
Depreciation	208083.00	Ashwamedhi, Indradhanushya Etc Fees	4710.00
Office Expenses	4050.00	Convocation Fees	43800.00
Remuneration	183950.00	Enrolment Fees	12600.00
TA/DA	36030.00	Examination Fees	251200.00
Teaching Assistantship	183290.00	Gymkhana Fees	160124.00
<b>Excess of Income over Expenditure</b>	<b>2829215.00</b>	Gymnasium Fees	15700.00
		I Card Fees	16800.00
		Internet & E-Mail Facilities Fee	502315.00
		Laboratory Fees	1000670.00
		Late Fees	1000.00
		Library Fees	800536.00
		MIS Fees	15700.00
		Student Aid Fund	47100.00
		Training & Placement Fees	100109.00
		<b>Indirect Incomes</b>	<b>2126226.00</b>
		Bank Interest	377612.00
		Interest on TDR	1717014.00
		N S S Fee	157000
<b>Total</b>	<b>5100190.00</b>	<b>Total</b>	<b>5100190.00</b>

**Budget Allotment for Academic Departments:**

		CHEMICAL	MECH	PETROCHEM	COMPUTER	ELECTRICAL	INFO TECH	ELECT & TELECOM	CIVIL	CHEMISTRY	PHYSICS	MATHS	ENGLISH
	EXPENSE DETAILS	Budget Estimates 15-16											
P.1.1	Salaries and wages Teaching	90,00,000	1,90,00,000	27,94,650	57,84,850	56,57,850	61,74,550	48,03,100	19,50,700	24,42,800	23,99,550	29,89,550	7,13,600
P.1.2	Salaries and wages Non-Teaching	10,00,000	12,00,000	8,07,250	7,20,000	10,44,750	12,00,000	10,56,200	6,22,000	5,65,500	3,50,850	0	0
P.1.3	Ad-hoc Salary Payments Teaching	6,00,000	5,00,000	8,63,350	0	7,65,750	1,68,700	14,22,450	16,85,500	8,13,900	7,40,650	4,92,700	2,41,450
P.1.4	Ad-hoc Salary Payments Non-Teaching	75,000	2,00,000	78,000	3,80,000	78,000	90,000	2,00,000	64,800	68,350	72,000	0	0
P.1.5	Daily Wages Salary	50,000	60,000	30,000	50,000	63,000	50,000	50,000	28,400	50,000	50,000	50,000	20,000
P.1.6	Machinery & Equipment UG	18,00,000	18,00,000	12,00,000	12,00,000	12,00,000	12,00,000	24,00,000	26,50,000	2,40,000	1,50,000	0	0
P.1.7	Machinery & Equipment PG	7,50,000	24,00,000	0	1,89,000	1,95,000	0	12,00,000	0	0	0	0	0
P.1.8	Machinery & Equipment UGC FUNDS	36,00,000	36,00,000	36,00,000	12,00,000	12,00,000	12,00,000	25,00,000	0	0	0	0	0
P.1.9	LIBRARY UGC FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
P.1.1	Laboratory Expenditure (recurring) 0	8,00,000	10,00,000	3,60,000	4,00,000	3,60,000	3,60,000	3,60,000	1,50,000	1,00,000	1,00,000	0	0
P.1.1	T/A/DA 1	84,000	1,20,000	60,000	84,000	60,000	84,000	84,000	20,000	36,000	36,000	36,000	20,000
P.1.1	Medical/LTC 2	84,000	1,44,000	50,000	84,000	60,000	84,000	84,000	20,000	48,000	48,000	48,000	36,000
P.1.1	Telephone Charges 3	0	0	0	0	0	0	0	0	0	0	0	0
P.1.1	Conferences & Seminars Reg. 4	72,000	50,000	48,000	72,000	48,000	72,000	60,000	20,000	24,000	36,000	36,000	20,000
P.1.1	Office Expenses 5	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	1,200	1,200	6,000	1,200
P.1.1	Departmental 6	25,000	25,000	25,000	25,000	25,000	25,000	60,000	25,000	0	0	0	0
P.1.1	Students' Activities 7	60,000	60,000	60,000	60,000	60,000	60,000	72,000	60,000	20,000	20,000	20,000	10,000
	<b>Total academic expenses:</b>	<b>1,80,06,000</b>	<b>3,01,65,000</b>	<b>99,82,250</b>	<b>1,02,54,850</b>	<b>1,08,23,350</b>	<b>1,07,74,250</b>	<b>1,43,57,750</b>	<b>73,02,400</b>	<b>44,09,750</b>	<b>40,04,250</b>	<b>36,78,250</b>	<b>10,62,250</b>

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प्रकरण ४

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## TEQIP-II मधील उल्लेखनीय यश



## प्रकरण ४

### TEQIP-II मधील उल्लेखनीय यश

TEQIP-I व TEQIP-II च्या माध्यमातून विद्यार्थींने विविध शैक्षणिक व संशोधनपर प्रकल्प यशस्वीपणे राबविले. TEQIP-II च्या माध्यमातून विद्यार्थींने पुढील उद्देश्य साध्य केले:

- विविध विद्याशाखांमध्ये विद्यावेतन प्रदान करून पीएच.डी. साठी विद्यार्थ्यांची नोंदणी करणे.
- वरील प्रकल्पांमध्ये M.Tech. व Ph.D. च्या विद्यार्थ्यांना सहभागी करून घेणे.
- वरील प्रकल्पांमध्ये पदवीस्तरावरील तृतीय वर्ष व अंतिम वर्ष च्या विद्यार्थ्यांना समाविष्ट करून घेणे.
- उद्योगांसाठी गरजाभिमुख व दूरस्थ प्रशिक्षण कार्यक्रम राबवून महसूल वाढविणे.
- पदव्युत्तर विभागाच्या अभ्यासक्रमाची उद्योगाभिमुख पुनर्रचना करणे.
- शिक्षकांना शिक्षणशास्त्र व विषयज्ञान संबंधी गरजाभिमुख प्रशिक्षण आयोजित करणे.
- शिक्षकेतर कर्मचाऱ्यांना गरजाभिमुख प्रशिक्षणाचे आयोजन करणे.

#### TEQIP अंतर्गत सुधारणा:

अभ्यासक्रमीय सुधारणा :

- Choice-based Curriculum
- 5 Electives
- Self-study courses
- Innovative Courses
- Mapping with NPTEL courses
- पदविस्तारावरील विद्यार्थ्यांना संशोधनाभिमुख प्रकल्प देण्यात येत आहेत ज्यामध्ये पदवीच्या अंतिम वर्षातील विद्यार्थी एमटेक व पीएच.डी. च्या विद्यार्थ्यांसोबत या प्रकल्पांवर काम करीत आहेत.
- ICT/IIT-B/B-RC सहकार्यात्मक प्रकल्प राबविले जात आहेत.
- ICT, मुंबई सोबत ७ Innovation Networking Projects (INN) मध्ये सहभाग
- एमटेक व पीएच.डी. च्या विद्यार्थ्यांसाठी संशोधन पद्धती या विषयावरील कार्यशाळेचे आयोजन.
- TEQIP-II अंतर्गत २९ विद्यार्थ्यांची पूर्णवेळ पीएच.डी. अभ्यासक्रमासाठी नोंदणी
- एमटेक व पीएच.डी.च्या विद्यार्थ्यांकडून ५० पेक्षा जास्त शोधनिबंध सादर. जवळपास २२० शोधनिबंध प्रकाशित करण्यात आले.
- Induction program on pedagogy चे आयोजन
- e-Governance: Online -ttendance System/Online PhD ची प्रणाली स्थापन करण्यात आली आहे.

#### कर्मचाऱ्यांसाठी प्रशिक्षण कार्यक्रम:

१. शिक्षकांसाठी विकास कार्यक्रम:

१ FDPs conducted in-house 15

2FDPs on pedagogy conducted in-house 03

4Faculty deputed outside for FDPs/STTPs/workshops 112

5Faculty deputed for conferences within India 26

6National conferences conducted in-house 01

7International conferences conducted in-house 01

2. Staff Development activity

2SDPs conducted jointly with CoEP and WCE Sangli 03

3Staff members deputed outside for SDPs/workshops 164

4Study tours of supporting staff 06

3. Participation of Faculty in International Conferences -broad:

आतापर्यंत तीन प्राध्यापकांनी परदेशातील आंतरराष्ट्रीय परिसंवादामध्ये शोधनिबंध सादर केले.

## शिक्षक व कर्मचाऱ्यांसाठी उपक्रम

### 1. Faculty Development Activity

2	FDPs conducted in-house	15
3	FDPs on pedagogy conducted in-house	03
4	Faculty deputed outside for FDPs/STTPs/workshops	112
5	Faculty deputed for conferences within India	26
6	National conferences conducted in-house	01
7	International conferences conducted in-house	01

### 2. Staff Development Activity

2	SDPs conducted jointly with CoEP and WCE Sangli	03
3	Staff members deputed outside for SDPs/workshops	164
4	Study tours of supporting staff	06

### ३. परदेशातील आंतरराष्ट्रीय परिसंवादातील शिक्षकांचा सहभाग

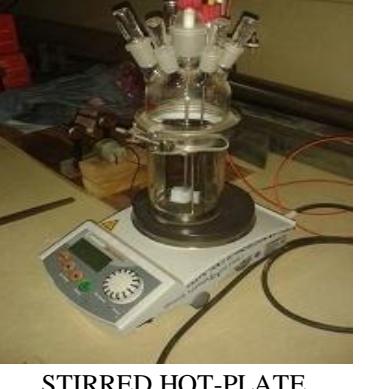
आतापर्यंत संस्थेतील तीन प्राध्यापकांनी परदेशात झालेल्या आंतरराष्ट्रीय परिसंवादामध्ये त्यांचे शोधनिबंध सादर केले आहेत.

### Status of Procurement

List of major equipment and software with their utility (costing more than Rs. 5 lakhs)

Sr. No.	Item	Utility
1	<u>Spectrum Analyser</u>	B.Tech./M.Tech projects and PhD
2	<u>EMI Analyzer</u>	B.Tech./M.Tech projects and PhD
3	<u>Focussed microwave for synthesis</u>	Research Scholar PhD work
4	<u>Diffused Microwave Reactor</u>	Research Scholar PhD work
5	<u>Stirred hot-plate (digital-plate) laboratory reactor</u>	Research Scholar PhD work
6	<u>Wireless Sensor Motes</u>	M. Tech projects and PhD
7	<u>CAD Workstations with network interface and audio</u>	B. Tech/ M. Tech Projects and Training
8	<u>Submerged Arc Welding Machine</u>	BTech/ MTech (Advanced welding projects/ Training programme)
9	<u>ICT Components</u>	B Tech online lecture facility, Training
10	<u>PCB Prototyping Machine</u>	B. Tech./M. Tech projects and PhD
11	<u>Advanced RF &amp; microwave antenna trainer</u>	B. Tech./M. Tech projects and PhD
12	<u>Combined Nitrogen Cum Air Generator</u>	Research Scholar PhD work
13	<u>Renewable energy Laboratory, Wind</u> Wind Emulator	B Tech/ M.Tech (Lab work/Advanced and minor projects/Testing/ Training program)
14	<u>Renewable energy Laboratory,</u> Wind Emulator	B Tech/ MTech (Lab work/Advanced and minor projects/ Testing/Training program)
15	<u>Renewable Solar PV trainer, Emulator</u>	B Tech/ MTech (Lab work/Advanced and minor projects/ Testing/Training program)
16	<u>dSPACE Kit 1104</u>	B. Tech/M. Tech projects and PhD
17	<u>AE Software and system</u>	B Tech/ MTech/ PhD (Acoustic emission correlation with metal cutting process)
18	<u>NI Data acquisition system</u>	M. Tech projects and PhD
19	<u>Tool makers Microscope</u>	B Tech/ MTech/ PhD (tool wear measurement)

20	<u>Embedded system</u>	B. Tech/ M. Tech Projects and training
21	<u>Software CATIA</u>	B. Tech/ M.Tech (Training/ Projects)
22	<u>Software for metal working simulation Abacus</u>	B. Tech/ M.Tech (Training/ Projects) and PhD Projects
23	<u>Opti-System Software</u>	B. Tech./M. Tech. projects and PhD
24	<u>EM Simulation software</u>	B. Tech./M. Tech. projects and PhD
25	<u>FEKO Software suite</u>	B. Tech./M. Tech. projects and PhD
26	<u>ANSYS Academic Research CFD</u>	B. Tech./ M.Tech. (Training/ Projects) and PhD Projetc
27	<u>MATLAB Software</u>	B. Tech./ M.Tech. (Projects) and PhD Projects
28	<u>SIMTEL Software</u>	B. Tech./ M.Tech. (Projects) and PhD Projects and Training

		
STEAM GENERATION DEVICE	DEEP FREEZER	STIRRED HOT-PLATE REACTOR
		
WIND EMULATOR	FOCUSED MICROWAVE FOR SYNTHESIS	MICROWAVE GENERATOR
		
ANALYTICAL BALANCE	DIFFUSED MICROWAVE REACTOR	AIR AND NITROGEN GENERATOR

**Expenditure on Procurement till-date**

Sr. No.	Item	Expenses (Rs. in lakhs)
1	Equipment	419.08
2	Software	59.46
3	Books	14.08
4	E-Books	3.24
5	Furniture	28.64
Total (Rs. in lakh)		524.50

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प्रकरण ५

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## दीक्षांत समारंभ



## प्रकरण ५

### दीक्षांत समारंभ

**परीक्षा विभाग :**

**विद्यापीठाची परीक्षा पद्धती:**

विद्यापीठ हे महाराष्ट्र शासनाच्या कायद्यानुसार स्वायत्त म्हणून स्थापित झालेले आहे. तसेच विद्यापीठाची परीक्षा हि विद्यापीठ कायद्यानुसार घेतली जाते. सध्या विद्यापीठात प्रत्येक सत्रात परीक्षा घेतली जाते.

**अभ्यासक्रम:**

प्रत्येक विषयाचा अभ्यासक्रम सहा भागांमध्ये विभागण्यात आला आहे. प्रत्येक सत्रातील चाचणी परीक्षा हि भाग १ व २ मधील अभ्यासक्रमावर आधारित असते. तसेच दुसरी चाचणी परीक्षा हि भाग ३ व ४ मधील अभ्यासक्रमावर आधारीत असते. सत्र परीक्षा त्याविषयाच्या संपूर्ण अभ्यासक्रमावर (भाग १ ते ६) आधारित असते.

**क्रेडीट पद्धती:**

सध्या विद्यापीठात क्रेडीट पद्धती अस्तित्वात आहे. सदर पद्धतीप्रमाणे विद्यार्थ्यांना ठराविक सत्रांमध्ये काही क्रेडीट मिळवावे लागतात. विद्यार्थ्यांचे परीक्षेतील प्रत्येक विषयाचे मूल्यमापन हे अक्षरी ग्रेड देऊन केले जाते. विद्यार्थ्यांची संपूर्ण सत्रातील शैक्षणिक कामगिरी cumulative grade point average (CGP-) च्या आधारावर मुल्यांकित केली जाते.

**सातत्याने मूल्यमापन:**

विद्यार्थ्यांच्या शैक्षणिक कामगिरीचे सातत्याने मूल्यमापन केले जाते. त्यात १५ गुणांच्या चाचणी परीक्षा व ७० गुणांची सत्र परीक्षा यांचा समावेश आहे.

**परीक्षांचे निकाल:**

सत्र परीक्षेतील सर्व विषयांचे गुण शेवटच्या परीक्षेनंतर ५० दिवसांचे आत जाहीर केले जातात.

**अनुत्तीर्ण विद्यार्थ्यांना विशेष मार्गदर्शन:**

सत्र परीक्षेत अनुत्तीर्ण झालेल्या विद्यार्थ्यांना त्या विषयाचे विशेष मार्गदर्शन दिले जाते. यासाठी खास मार्गदर्शनपर वर्ग कार्यरत असतात. सदर वर्गांमध्ये समजप्यास कठीण व परीक्षेच्या दृष्टीने महत्वाच्या धड्यांचे मार्गदर्शन करण्यात येते.

**संपूर्ण पारदर्शकता:**

विद्यापीठाच्या परीक्षा पद्धतीमध्ये संपूर्ण पारदर्शकता आहे. प्रत्येक चाचणी परीक्षेनंतर विद्यार्थ्यांना त्यांच्या उत्तरपत्रिका दाखविल्या जातात. यावेळी विद्यार्थी शिक्षकांशी मुल्यांकनाबाबत मतभेद असतील तर चर्चाही करू शकतात. विद्यार्थ्यांना सत्र परीक्षेच्या उत्तरपत्रिकांची पुनर्तपासणी सुविधा उपलब्ध आहे. अनुत्तीर्ण विद्यार्थ्यांची पुनर्परीक्षा पुढील सत्र परीक्षेत घेतली जाते.



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प्रकरण ६

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डॉ. बाबासाहेब आंबेडकर यांचे १२५ वे जयंती वर्ष



## डॉ. बाबासाहेब आंबेडकर यांचे १२५ वे जयंती वर्ष

प्रत्येक वर्षी विद्यापीठामध्ये १४ एप्रिल रोजी डॉ. बाबासाहेब आंबेडकर व्याख्यानमालेचे आयोजन केले जाते. यानिमित्त वर्षभर विद्यापीठामध्ये विविध कार्यक्रमाचे आयोजन करण्यात आले. जसे कि डॉ. बाबासाहेब आंबेडकर यांचे जीवनकार्य या विषयावर निबंध स्पर्धा, वकृत्व स्पर्धा, रांगोळी स्पर्धा, प्रश्नमंजुषा, Clay Modeling, कविता वाचन स्पर्धा इ. विद्यार्थ्यांनी शिक्षकांच्या मार्गदर्शनाखाली या स्पर्धामध्ये सहभाग नोंदविला. सर्व कर्मचाऱ्यांनी उत्साहाने हे सर्व उपक्रम राबविले. यापैकी लक्षणीय उपक्रम म्हणजे वकृत्व स्पर्धा होता ज्यामध्ये पदवी व पदविका स्तरावरील १५ विद्यार्थ्यांनी सहभाग नोंदविला. सदर स्पर्धासाठी खालील विषय देण्यात आले होते.

- डॉ. बाबासाहेब आंबेडकर व त्यांचे राष्ट्र उभारणीतील योगदान
- डॉ. बाबासाहेब आंबेडकर व त्यांचे महिला सबलीकरणासाठी योगदान
- डॉ. बाबासाहेब आंबेडकर व भारतीय संविधान
- डॉ. बाबासाहेब आंबेडकर, एक शिक्षणतज्ज्ञ
- डॉ. बाबासाहेब आंबेडकर व त्यांचे सामाजिक समतेसाठी योगदान

डॉ. बाबासाहेब आंबेडकर व्याख्यानाचे आयोजन १५ एप्रिल, २०१६ रोजी करण्यात आले होते. त्यासाठी प्रमुख वक्ते म्हणून श्री. बी. जी. कोळसे पाटील उपस्थित होते. या व्याख्यानाशिवाय महात्मा फुले व सावित्रीबाई फुले यांच्या जयंत्या साजऱ्या करण्यात आल्या.



Elocution Comptition



Savitribai Phule Jayanti





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प्रकरण ७

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## प्रशासकीय / शिक्षकेतर कर्मचारी



प्रकरण ७  
प्रशासकीय / शिक्षकेतर कर्मचारी

कुलगुरु सचिवालय



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सरगडे,  
प्र. कुलसचिव  
M.Tech., Ph.D.



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B.A.



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# विद्यापीठ गीत

बिंदू मनाचा किंदू होईती, करु अथक साधना  
ज्ञान रवीने तिमीर हराया विकसित हो रे मना !!

अभिभंत्रित है ज्ञान निकेतन  
इथै कराया हृदय समर्पण  
श्रीमडयोतीची, सावित्रीची  
विश्वात्मक त्या मनकरूपीची  
दैऊ उरी चैतना !  
विकसित हो रे मना !

शिवतौजाने उजळै अंबर  
तरंग त्याचै इथै निरंतर  
शीर्य धीर्य अन् पराक्रमाची  
सह्याद्रीतील त्या नाथैची  
रुजावू सद्भावना !  
विकसित हो रे मना !

सरस्वतीच्या कुपाप्रसादै,  
आयुष्याचै फूल उभटू दै !  
कर्तृत्वाचा दीप उजळू दै !  
सत्यशिवाचै बीज बहूदै !  
आत्मशक्तीचा सूर ठाभू दै !  
दैऊ रूप डीवना !  
विकसित हो रे मना !

गीत : प्रविण दवणे  
संगीत : श्रीधर फडके

