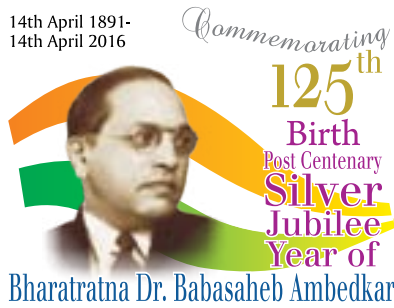


14th April 1891-  
14th April 2016

[www.bamu.ac.in](http://www.bamu.ac.in)



University - Industry Interaction Summit- 2015

# Souvenir

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad



A Grade  
NAAC Re-Accredited  
Dr. Babasaheb Ambedkar  
Marathwada University,  
Aurangabad (Maharashtra State)



Chamber of Marathwada  
Industries and Agriculture,  
Aurangabad (Maharashtra State)

**UNIVERSITY - INDUSTRY  
INTERACTION SUMMIT**

**29-30  
October  
2015**

Commemorating Post Centenary Silver Jubilee Celebrations  
(125th Birth Anniversary Year) of Bharatratna Dr. Babasaheb Ambedkar



**Role of CSR in Making  
Dr. Babasaheb Ambedkar Marathwada University:  
A World Class University**







Dr. Babasaheb Ambedkar Marathwada University, Aurangabad



**Bharat Ratna Dr. Babasaheb R. Ambedkar**

***“We Salute You”***

Post Century Silver Jubilee (125<sup>th</sup>) Birth Anniversary

14th April 1891-  
14th April 2016



Commemorating  
**125<sup>th</sup>**  
Birth  
Post Centenary  
**Silver**  
Jubilee  
Year of

Bharatratna Dr. Babasaheb Ambedkar



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

14th April 1891-  
14th April 2016



Commemorating  
**125<sup>th</sup>**  
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Dr. Babasaheb Ambedkar Marathwada University, Aurangabad



'A' Grade  
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Chamber of Marathwada  
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INTERACTION SUMMIT**

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Dr. Babasaheb Ambedkar Marathwada University, Aurangabad



Publisher :  
**Professor M D Shirsat**  
Registrar,



# UNIVERSITY - INDUSTRY INTERACTION SUMMIT

29-30  
October  
2015

## Role of CSR in Making Dr. Babasaheb Ambedkar Marathwada University: A World Class University

Organized by

Dr. Babasaheb Ambedkar Marathwada University

&

Chamber of Marathwada Industries and Agriculture (CMIA)

October 29-30, 2015

Venue: Main Auditorium, University Campus

### Technical Programme Schedule (Tentative)

Thursday, October 29, 2015 (Day 1)

08:00 am to 09:00 am	Registration, Breakfast and Networking	
Inaugural Programme: Coordinator: Professor Bharti Gawali		
09:00 am to 11:00 am	Inaugural Programme	Chairman: Hon'ble Shri. Haribhau Bagde, <i>Speaker of Maharashtra Legislative Assembly.</i> Chief Guest: Hon'ble Shri Sudhirji Mungantiwar, <i>Finance Minister, Maharashtra.</i> Auspicious Presence : Hon'ble Vice-Chancellor Professor B. A. Chopade Guest of Honor: 1) Shri Shashikant Garware, Chairman, Garware Ind 2) Dr. Habil Khorakiwala, Chairman , Wockhardt Group 3) Shri Rahul Jamnalal Bajaj, Chairman, Bajaj Auto 4) Shri Nandakishor Kagliwal, Chairman, Nath Seeds 5) Shri Venugopal N. Dhoot, Chairman & MD, Videocon Group Briefing by: Professor M. D. Shirsat, Convener
11:00 am to 11:30 am	Tea Break	
First Technical Session: Co-ordinator: Dr. S. D. Deshpande		
11:30 pm to 12:00 noon	Speech by Hon'ble Vice-Chancellor Professor B. A. Chopde	Topic: Role of CSR for Making Dr. Babasaheb Ambedkar Marathwada University as a World Class University.
12:00 noon to 12:20 pm	Dr. Sanjay Chahande Principal Secretary, Higher & Technical Education, M.S., Mumbai	Topic : Role of CSR in development of University

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**Second Technical Session: Co-ordinator: Prof. Sachin Deshmukh**

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12 :20 am to 01:35 pm	Make in India	Keynote Speaker : Mr. Ramchandra N. Bhogale, MD, Nirlep Group, Aurangabad Speaker from local Industry : Mr N. Shriram, Endress+Hauser, Waluj Speaker from University : Dr. Pravin Wakte, UDCT, Dr.BAMU
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01:35 pm to 02:30 pm	<b>Lunch Break</b>	
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**Third Technical Session : Co-ordinator: Dr. Kunal Datta**

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02:30 pm to 03:45 pm	Digital India	Keynote Speaker : Speaker from local Industry : Shri Prashant Deshpande, Expert Solution, Aurangabad Speaker from University : Dr. Sachin Deshmukh, Dr. BAMU
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03:45 pm to 04:00 pm	<b>Tea Break</b>	
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4:00 pm to 4:20 pm	Dr. Prashant Naravare, Collector (IAS), Osmanabad	Topic: CSR in Academics
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**Panel Discussion Topic : Industry – University Interaction : Action Plan**

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04:20 pm to 05:50 pm	Session Moderator : Prof. M. D.Shirsat, Registrar, Dr. BAM University, bad 1) Dr. Sanjay Chahande, Principal Secretary, Higher Technical Education 2) Prof.B.M.Naik, Member Board, GECA & Committee Member-TEQIP 3) Shri Prasad Kokil, Secretary, CMIA 4) Shri Ashish Garde, President, CMIA 5) Shri Mahendra Wani, Siemens 6) Ms. Mohini Kelkar, Grand Master 7) Shri Kailash Zanzari, Bajaj Auto Ltd.	
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**Friday, October 30, 2015 (Day 2)**

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**First Technical Session : Co-ordinator: Dr. Kunal Datta**

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09:00 am to 10:15 am	Skill India	Keynote Speaker : Shri Dilip Dharurkar, MD, NAC, Waluj Speaker from local Industry : Shri Navin Nijhawan, Bajaj Auto Speaker from University : Professor M. D. Shirsat, Dr. BAMU
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**Second Technical Session : Co-ordinator: Prof. S. S. Patil**

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10: 15 am to 11:30 am	Clean India	Keynote Speaker : Shri Bhaskar Munde, DMIC, Aurangabad Speaker from local Industry : Shri Vinod Nandapurkar, Garware Ltd Speaker from University : Dr. N N Bandela, Environmental Science
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11:30 am to 11:45 am	<b>Tea Break</b>	
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**Second Technical Session : Co-ordinator: Dr.G.D.Khedkar**

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11:45 am to 01:00 pm	Biotechnology and Agricultural	Keynote Speaker : Shri Rajendra Barwale, Mahyco / Mr.Ritesh Mishra Speaker from local Industry : Dr.M.K.Sahib, Director-Biotechnology R&D, Wockhardt Speaker from University : Dr.G.D.Khedkar, Dr.BAMU
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01:00 pm to 02:00 pm Lunch Break

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**Third Technical Session : Co-ordinator : Dr. S. D. Deshpande**

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02:00 pm to 03:15 pm	Energy and Environment ( Renewable Energy and Energy Conservation)	Keynote Speaker: Dr. E.V. Muley, Ex. Director of Ministry – Environment and Forest, Govt. of India. Speaker from local Industry : Shri Suresh Todkar, S.S. Controls, Abad Speaker from University : Prof. Satish Patil, Dr. BAMU
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**Panel Discussion****Topic : Industry – University Interaction : Action Plan**

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4:00 pm to 4:20 pm	Shri. Mukund Kulkarni, Session Moderator 1) Shri Umesh Dashrathi, M.D, Rucha Group 2) Shri Milind Kank, M.D,Yashshree, Pvt Ltd 3) Shri Ritesh Mishra, Lead Regulatory Affairs, Mahyco 4) Shri K.S. Rao, COO, Sterlite 5) Shri Anil Maklova, Crompton Greaves
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04:40 pm to 05:00 pm Tea Break

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**Valedictory Function Co-ordinator: Mr. Nivrutti Gajbhare**

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05:00 pm to 06:00 pm	Valedictory Function	<b>Chief Guest : Shri Subhash Desai,</b> Industry Minister, Government of Maharashtra <b>Presided by : Hon'ble Vice - Chancellor Professor B. A. Chopade</b> Special Attraction: Launching of Mobile Application for students by MKCL and University & Indian Constitution Awareness Program, Online Examination At the Eve of Post Centenary Silver Jubilee Celebration
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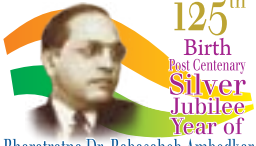
Dr. Babasaheb Ambedkar Marathwada University, Aurangabad



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Commemorating  
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Year of



Bharatratna Dr. Babasaheb Ambedkar



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad



## Foreword by Hon'ble Vice Chancellor

The education scenario across the nation is taking rapid progressive steps. Objectives of imparting education has been matured with clear conscience of the changing necessities of the society. As a prominent face of this proceeding, the efforts to bring academic endeavours and industry on the same platform is perhaps the unsurpassed futuristic step to bring a revolution for India tomorrow. These sectors, that have the highest impact on architecting economic and social portfolio of a nation, has remained at distance for long and now the time has come to break the jinx. We need to look beyond just paper collaborations and identify niches where industry and academia can become active 'take parts' in each other's material, intellectual as well as holistic development.



Dr. Babasaheb Ambedkar Marathwada University has an admired history of responsiveness to the evolving needs of students and the world. Considering the rapid rate of changes across the world, the complexity of challenges in facing the same is more critical than we have conceived ever. Therefore, it is high time that that we strategically anticipate needs and opportunities and refine our institutional vision in today's perspective. At this hour of tremendous uncertainty among youth, the highest hurdle for any academic institute in India is drafted by the increasing number of unemployment and equal tragic is the fact that industries are having strict paucity of able human resource. This mismatch can only be eradicated if the academia and industries open heartedly come together, discuss each other's strength and requirements, to be the perfect supplementary in the meaningful growth of either. I am happy that Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, has taken the vow to mechanize realistic and fruitful efforts in this direction.

A comprehensive academic strategic plan was conceived in the month of June, 2014 when I took over as a Vice-Chancellor of this university, to make Dr. Babasaheb Ambedkar Marathwada University a World Class University. Among the first few steps that I took from the deep faith of my heart, was the establishment of an Incubation Centre, with a dream that this center will promote faculty members and students to transform their innovative ideas into commercial products and an University-Industry Inter-linkage center, through which we can reach the industries with the strong research base and intellectual infrastructure we are having. I am happy to mention that Dr. Babasaheb Ambedkar Marathwada University is pioneering in establishing University-Industry linkages Cell. This centre was established in the university campus prior to the announcement of University Grants Commission for embellishment of this kind of endeavour. Within a very short period that I had devoted in talking with various industries it was evidently found that the response was overwhelming and only sky was the limit. It is my pleasure to place on record our indebted gratitude to Bajaj Group of companies for being highest benevolent in setting up a state-of-the art Incubation Centre in the University. Likewise, there are numerous hands of assistance with their exuberant suggestions in the sectors of curriculum design, infrastructure development, training, and placements.

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University-Industry interaction being a highly collaborative process, faculty members and research scholars have to come forward to establish one-to-one linkages with Industries so that requirements of Industries could be understood and innovative ideas could be fine-tuned accordingly. In general open innovation framework via R&D and technical outsourcing activity has important effects on innovation. Therefore, significant and positive results between R&D and technical outsourcing and innovation in terms of products/ services, processes and even organizational innovation will be very important.

This university has prepared a comprehensive plan to strengthen the University-Industry Interaction. Organization of University-Industry Interaction Summit on October 29-30, 2015 is one the events in the series. This summit is the key event for academics and Industry representatives to discuss various issues related to university-industry interaction, innovation and entrepreneurship.

Main objective of this summit is to develop a better understanding with local industries so that innovative ideas could be transformed to the commercial products and to identify the various avenues through which Dr. Babasaheb Ambedkar Marathwada University can interact with local firms, businesses and other intermediaries in relation to academic, research and innovation activity.

Let the University-Industry Interaction Summit not be considered as 'just another conference', but the event to network, learn and experience. During this two day event, you will have a wide variety of presentations, panel discussions, and participate in numerous networking opportunities.

I would like to appeal everyone to come forward to join this initiative.

We look forward to continuing our collaborative efforts as we begin the process of identifying and implementing specific strategies and action plan for strengthening university-industry Interaction.

**Professor B. A. Chopade,**

Vice-Chancellor,

Dr. Babasaheb Ambedkar Marathwada University,  
Aurangabad- 431 004 (MS)



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad



## Foreword by Professor M. D. Shirsat

In India, universities and industry have been operating in separate domains till long. However, through a considerable span of time, the scenario is changing and India has witnessed a meaningful collaboration between Universities and Industry. Moreover, the rise of a global knowledge economy has intensified the need for strategic partnerships that should go beyond the traditional concept of seed funding of discrete research projects. World-class Universities are at the forefront of pioneering such partnerships through which they are successful in transforming the outcome of the research to tackle social challenges and drive economic growth.



In response to growing complexity of the education and business environment today, universities and industry have to come closer. Universities not only contribute in providing skilled human resources and intellectual support to business, but in various unexplored formats that needs consideration. The intersecting needs and mutually interdependent relationship requires identifying means of further strengthening academia-industry partnerships.

When Industries and universities work in tandem to push the frontiers of knowledge, they become a powerful engine for innovation and economic growth. Silicon Valley is wonderful example of such joint venture. With such success models in vision, through an interactive and collaborative arrangement, the Academia- Industry Interface should work for the achievement of certain mutually inclusive goals and objectives.

The proposed interface meet aims to address the challenge of bridging the academia-industry gap by highlighting the facts on – (i) what makes universities attractive as industry partners, (ii) what structures effect excellent partnerships and (iii) what approach produces seamless interactions, from the viewpoint of Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. It is highly expected that through talks, discussions and debates, genuine recommendations by visionaries from both sides will see daylight to offer this much awaited juncture, a boost for futuristic strides.

I hope that through this summit, the people of academia will be getting unabridged concept of industry standards and demands while the industries will be clearly apprised of the infrastructural and intellectual strength of the University. These aspects has to be handled with highest impetus so that possible future linkages are refrained from disappointing conundrums. Rather, we should develop clear ideas on being successful to overcome our inherent differences to forge the highest level of strategic partnership.

I solemnly feel that Henry Ford should most honorably quoted on this occasion – 'Coming together is a beginning; keeping together is progress; working together is success.

Let us look forward towards a throttle of ideas out of this summit.

**Professor M. D. Shirsat,**  
Registrar and Convener,  
University-Industry Interaction Summit

## University – Industry Linkage: Way forward for creating a win - win situation

Aurangabad, our city is blessed with having a rich historical and multi cultural background. A city which was twice the capital of our great nation. At one hand, we have an A grade university, which hosts more than 40 departments and has more than 400 institutions affiliated under the umbrella covering more than 4.4 lack students in various courses and at the other hand , we have more than 1000 Large, Medium, Small and Micro Industries employing more than 1 lack people. There are many stake holders and indirect beneficiaries of the industries.

With a strong government focusing on the Skill India and Digital India initiative to Make In India, the need of the hour is how the Industry and University can collaborate with each other to create a talent pool which will serve the future needs of our nation. We have to take a huge leap - from skill dearth, to skill surplus nation as skill development in youth and students of our region can create a win – win situation. Skilling is an important aspect which will have a long term impact on the economy and development of our city (which is in the race of becoming a smart city) and ultimately nation. In my view, to create this, following things can be useful

- ① Establishing communication forum for regular Industry-University Connect- In professional organizations like ours, we have well established programs to connect with our customers , putting them at first place. By these meetings, we come to know what is expected from us in this changing market scenario and we strive hard to provide the answers to their questions. In similar manner, regular communication forums by university officials ( Including select Institute Heads) with Industry professionals (Holding people responsibilities and at a senior level) can be scheduled so that the market required skills can be endorsed by the students of different streams during their academics itself.
- ② Ownership Mindset - The Head of particular faculty/ stream should own the students and develop a mentorship mindset. The mindset of "Institutions/ University is only for education and we need not strive for their placements" now has to change for creating a better future (At least for all PG/ Professional Courses). Students who join the professional courses do so, ultimately to get in to a descent job. Industry carry out recruitment majorly based on merit and intellect of particular student in the specific area / stream. If knowledge impartment is clubbed with structured efforts of campus placements, the result can surely be win – win for Industry- Institution and most important- Students which will contribute in Skill India.
- ③ Establishing communication forum for regular Industry – University Connect- In professional organizations like ours, we have well established programs to connect with our customers , putting them at first place. By these meetings, we come to know what is expected from us in this changing market scenario and we strive hard to provide the answers to their questions. In similar manner, regular communication forums by university officials ( Including select Institute Heads) with Industry professionals ( Holding people responsibilities and at a senior level) can be scheduled so that the market required skills can be endorsed by the students of different streams during their academics itself. talent readiness point of view. Industry



personnel should also take out time for the knowledge transfer for preparing ready candidates who can be absorbed by industries

- 4 Emphasis on Industry required syllabus/ Courses/ Projects – As we all are aware that the technology today is changing at a very rapid speed and the demands from industries are also shifting from a traditional student to an updated student(In any stream/ area). (Take an example, with the help of big data, one can get answers to the recent searches over internet. Organizations like google offers any kind of answers to queries.) In such a dynamic scenario, university and Industries should connect on regular basis to review and update course curriculum which is primary requirement of skill development. Of course, keeping the basic concepts strong, the need of the hour is to add on few topics/ arrange regular seminars where the students can understand challenges when they are out from the campus and getting prepared to enter into the corporate sector. Electives can be added in more numbers and industry specific projects should be made mandatory where the students should complete projects in area of specialization. Many organizations in Aurangabad prefer project trainees and also offer projects which involves great learning opportunity and actual on the job learning.
- 5 Increasing representation at various Professional forums at all levels - The institutes and university should focus on branding and making its presence felt through various professional forums across . We have various such forums active in Aurangabad region like CII( Confederation of Indian Industries – which is premier industry association body), CMIA ( Chamber of Marathwada Industries and Agriculture –A premier regional industry association) , NIPM ( National Institute of Personnel Management – A premier national association of Human Resource Professionals) etc. The representation from University and affiliated bodies will increase interaction and the industries will compel to think for recruiting from the same region, before recruiting from outside.
- 6 Flagship Program/ Course- The university, in association with select industries can have one flagship program/ course which can be showcased and high lighted across boundaries. The program, to be designed with world class standards and executed with utmost professional manner, will definitely bring laurels to the university and the people associated with the same. Just like, Make In India is a known phenomena across the world, Its time for us to Make In Aurangabad – Make in Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

**Anurag Gopal Kalyani**  
Senior Manager- Human Resources  
Siemens Ltd, Aurangabad  
anuragkalyani@gmail.com



## Marathwada Industry can be Globally Competitive Only when it Synergies with University

Marathwada is at risk for want of university- industry partnership. If the university and industry synergies, make shared vision and collective ambition through corporate social responsibility and jointly establish Research Park/ Innovation Park, undoubtedly economy and job generation will grow by leaps and bounds, not otherwise.

Investment in industry without matching investment in university will not give expected results. Compatibility between the policy for higher education and policy for industrial development is essential. All world class universities have Research Parks [1] on campus. New Technology Based Firms are born in university for example; Yahoo, Google, SISCO and 3000 companies are born in Stanford University. Universities in China, Australia, and Europe are not behind. It is they who have generated hi-tech employment with high income. Anil Kakodkar committee [2] has recommended this to Maharashtra Government. China in the recent past has established more than 300 Research Parks. Their progress is attributed greatly to these research parks. Nations / regions are more prosperous where university- industry partnership exists. Education in such nations is innovative, creative, relevant, and fitting to industrial needs. There is no mismatch in skills demanded and skills provided. New Technology Based Firms are born and generation of jobs of high income take place. Nations where universities and industry go hand in hand are richer offering better standard of living to its people. They with each other's support create brand new technologies, new products and new processes. Joblessness is a rare phenomenon. Innovators from industry and innovators from universities consciously meet time and again at innovation parks to show the way to industries. Incubation centres, Research Parks, Entrepreneurship centres, start ups grow. Majority funding is through Venture capital, putting untried, untested virgin sun rise technologies in commercial application. "First mover entrepreneurs, Technopreneurs"[3] are leading. So far, foreign collaborators have propelled the Indian industry. Will Indian universities, academics, researchers now propel?

Who does not want Hi- Tech, high income job generation? American industry in association with universities helped to transform America in to economic power house. Can Indian industry not do this? The solution lies in jointly establishing research Park. Now government has launched ambitious projects like, Make in India, Digital India, Smart cities, Smart villages, Delhi Mumbai Industrial Corridor Project [DMIC] in Aurangabad, and raise funds through 2% of profit in Corporate Social responsibility. What are the role and responsibility of BAMU and its colleges for their successful implementation? What is the role of industry and university to make Marathwada globally competitive? Their prime role in today's knowledge driven economy is to jointly produce, globally competent leaders, professional and political leaders for industry and for various walks of life [4]. Can the universities ever produce leaders all alone by themselves without the help of industry? They essentially need partnership with industry. What kind of leaders they produce? Mediocrity in universities prevails and mismatch occurs. What is wanted is not taught and what is taught is not wanted. Mackenzie report says only 15% graduates are employable. Industry and university when they come together they stand tall. In isolation, they cannot achieve peak performance. There is a war on talent. Companies are attracting best talent from anywhere and everywhere in the world, by paying attractive salaries and perks. Can BAMU graduates win in race?





Dr. Babasaheb Ambedkar Marathwada University, Aurangabad



Universities are assuming key role in global economic systems, where new knowledge and highly skilled people are perceived as fuel for economic development. How can BAMU become world class? BAMU ought to be charged with a spirit of enterprising culture and innovation spirit to move Marathwada forward. University and industry partnership is critical for the growth and prosperity. This partnership alone can give "Technology push", matching with "Market pull". Universities and colleges then become "Light House". Students today, are leaders tomorrow. They may be in engineering, industry commerce and trade or in politics. They ought to be globally competent. World class universities produce globally competent leaders, others produce mediocre. It is the leaders who matter most for growth and prosperity. Where are the leaders born or made? Seeds are sown within the four walls of class rooms of universities and colleges. If BAMU and industry jointly establish Research Park with CSR funding it will eradicate poverty.

Can BAMU in partnership with industry propel industrial development? Certainly yes it can. Indian professors in USA have done this; they will do so in BAMU. Universities and industry are interdependent. They cannot be mutually exclusive. They have to be supportive to each other. No industry to be globally competitive howsoever big and strong can do all the research it needs, all alone by itself. It has to depend on public research done in universities. Industry needs access to first class research in universities, so also researchers in universities need access to industry for application of research findings. Growth and prosperity of a region depends now on presence of world class universities.

Universities are globally competitive only if its professors are globally competent, and not without them even if the infrastructure is five star. Industries and universities should take a long range view, come together to attract globally competent professors

Indian industry needs to conduct research and innovation in association with universities, if it is to compete in knowledge driven economy. Cities, regions are underdeveloped and trailing behind the world not because they are short of resources, but because they lack shared vision to create world class universities and colleges to nurture globally competent professional leaders. World ranking of universities has therefore assumed, world over, great significance. Cities and regions grow faster and on sustained basis only when they have world class universities and not without them even if they have abundant natural resources. They have become a determinant factor for region's economy to prosper. The differentiating factor between developed and developing nations is the presence of world class universities.

Want to be globally competitive? Then emulate Industry Institute Interaction Model abroad. What we observe differently in higher education institutes abroad is that R & D units of private companies are flocking round and parking on the periphery of universities in search of new knowledge. These R & D units draw on the intellectual capital of the university. They use the expertise of professors, use research infrastructure, like labs, library and the innovative talent of young energetic students. The experts in private R & D lecture to students in university. There is an exchange of knowledge and innovative ideas continuously between the companies and the university. The interaction between the university and companies enriches both. By doing this, they subsidize each other's cost of education and research. This system especially fires the power of imagination of students, and inspires them with creativity. This I have personally observed in many universities like McMaster University in Canada, Karlsruhe University in Germany, Wisconsin university at Madison in USA and several others. This is widely prevalent in many universities from many years. Industry and university ought to have shared ambition to create enterprising culture. It is hoped that the leaders in industry,

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leaders in academia, social and political systems come together, work together, use collective wisdom and give a proper shape to build Marathwada a developed region.

### **In conclusion,**

Success in international competition depends now on turning intellectual capital into marketable commodities, faster than one's competitors. Future belongs to those who understand this. Distinguished professors in BAMU and leaders in industry should form a forum; for creating enterprising culture, and meet frequently.

Without a research park, Dr. Babasaheb Ambedkar Marathwada University and industry, howsoever hard they may work, will remain behind in international competition. You need a swimming pool to learn swimming.

World experience tells us that any company unwilling to commit the funds and efforts required by strategic alliances with university will not likely reap benefits of new technology. As a result those companies most likely will not be a major force in industry ten years from now.

### **Prof B M Naik**

Member,  
Board Government College of  
Engineering, Aurangabad.  
Steering Committee Member,  
Technical Education Quality  
Improvement Program,  
Maharashtra Government.



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad



## Lean Manufacturing Competitiveness Scheme (LMCS) Enhance productivity and competitiveness.

Ministry of Micro, Small & Medium Enterprises (DC-MSME), Govt. of India has introduced Lean Manufacturing Competitiveness Scheme (LMCS), for the benefit of Micro, Small and Medium Enterprises (MSMEs) in our country.

The objective of this Lean Clusters drive is to support MSMEs for undertaking lean manufacturing (LM) so as to enhance their productivity and competitiveness by reduction of wastages in manufacturing processes, inventory management, space management, energy consumption, etc.

The LM techniques also result in reduction in rejection, standardization of processes, better layout of machines resulting in reduced transportation of products during manufacturing, etc. The implementation of LM techniques leads to cost reduction for MSMEs. It also has lot of social benefits in terms of training of workforce, creation of knowledge, increased productivity, lower input costs to other industries, introduction of new production equipment/methods in manufacturing and development of work culture in society.

The implementation of lean manufacturing technologies in the enterprises will lead to increasing return to scale, i.e (i) Economy of scale that reduce per unit production cost and (ii) Increased productivity of the enterprises (iii) Enhanced competitiveness in domestic and overseas markets.

Simultaneously it also leads to increased expertise in the firm in respect of better work culture, managerial competencies, etc. While some organizations in the country have initiated lean manufacturing practices and have started to reap the benefits, these practices have not reached many MSMEs in the country. The concept and techniques of lean manufacturing is still novel to most of the micro and small enterprises in the country.

Under the LM Scheme, MSMEs will be assisted in reducing their manufacturing costs, through proper personnel management, better space utilization, scientific inventory management, improved process flows, reduced engineering time and so on with the application of LM techniques.

At Aurangabad, five lean clusters have been sanctioned by Ministry of MSME, namely –

1. Plastic Lean Cluster
2. Machining Lean Cluster
3. Engineering Lean Cluster
4. Metal Treatment Lean Cluster
5. Parivartan Lean Cluster

To drive this initiative, the coordinators of Chamber of Marathwada Industries and Agriculture (CMIA), Marathwada Association of Small Scale Industries And Agriculture (MASSIA) and above lean cluster heads have decided to seek help of local Engineering colleges and institutions in the form of deploying the students mainly of Mechanical Engineering stream who can assist the principal Lean Consultants in Implementation of Lean Tools and Techniques in the above clusters.

This programme will help the students to gain in-depth knowledge of production processes and the implementation of Lean Manufacturing and can also consider as their curriculum projects.

This scheme is active for 18 months, starting from November 2015, and the students can participate as per their vacations, available time, and time allotted for curriculum projects, and can contact secretariat of CMIA/MASSIA.

**Raman Ajgaonkar**  
Member, CMIA, Aurangabad

## Enabling 'Make in India'

Science and Technology have always been an integral part of Indian culture. Natural philosophy, as it was termed in those ancient times, was pursued vigorously at institutions of higher learning. The Indian Renaissance, which coincided with our independence struggle, at the dawn of 1900s, witnessed great strides made by Indian scientists. This innate ability to perform creatively in science came to be backed with an institutional setup and strong state support after the country's independence in 1947. The initiatives by government of any land play a pivotal role in promotion of science and technology in the country. The outcome of such promotion leads to the developed country.

The Make in India is such a national program which includes major new initiatives designed to facilitate investment, foster innovation, protect intellectual property, and build best-in-class manufacturing infrastructure which will lead to advanced India. The theory behind "Make in India" is as simple as it is compelling. India must become a manufacturing powerhouse in order to gainfully employ its demographic dividend; there is no choice here. Fortunately, we have many natural advantages including a big labour pool and a large domestic market. In addition, with China's competitive advantage in manufacturing eroding, India has the opportunity to take some share of global manufacturing away from China. All we need to do is to improve the ease of doing business in India, which includes the reforms in tax mechanism, improved infrastructure, reforms in labour laws, investment in skills development, implement Goods and Services Tax (GST) and fast track approvals. Then, we will take our rightful place as the world's factory alongside China.

Prime Minister Shri. Narendra Modi, in his maiden Independence Day speech, articulated his vision of several social and economic policy objectives of new government. The Prime Minister has commended for stating clearly that domestic manufacturing needs to be the core and central tenet of his foreign investment policy as that puts job creation or employment generation at the top of the objectives in inviting foreign investment to the country.

This welcome emphasis in our foreign investment policy on efficient and competitive domestic manufacturing will serve multiple objectives. First and foremost, it will enhance job opportunities within the country; second, it will minimize the imports of such products into the country, thereby mitigating the pressure on our trade deficit; third, in the long run, if not in the near-term, it will help augment and diversify our exports from the manufacturing sector; fourth, it will help in bringing latest technologies into the country and lastly, such domestic manufacturing will help minimize some of the trade frictions we have with other countries. The importance of domestic manufacturing with foreign investment in reducing trade frictions with other countries is at present ignored or underestimated. As a corollary, the focus on world-class domestic manufacturing may also be the best way to cope with globalization and to maximize the possible benefits from it. The size of our domestic market and the abundant availability of skilled and technical manpower at low cost is a leverage that we need to put to use consciously to induce foreign investors to make India as a manufacturing hub in their operations. The lessons to be learned from China, is how the size of the



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domestic market and the availability of skilled and disciplined manpower could be put to effective use for the industrial and technological development of the country with foreign investment. It is, however, in the translation of the policy into practice that co-ordinated action is needed on several fronts. First, it is of paramount importance that the foreign investment, foreign trade and intellectual property rights (IPR) policies are viewed in a holistic manner to ensure that they mutually reinforce each other in achieving the policy objective of world-class domestic manufacturing.

IPRs do not consist only of pharmaceutical patents as is commonly understood in our country: they include as well copyright, trademarks, trade secrets, geographical indications, designs, trade secrets, business confidential information and data, and the like.

Even if our IPR policies do not have domestic manufacturing as a central objective, they need to be implemented in such a way that they do not impede or deter technology-oriented domestic investments from foreign investors. The Intellectual manpower in the country residing in the university departments must be put to use for the development and proper use of intellectual property rights. The protection of patents, trademarks, trade secrets, layout designs and the like is crucial to these and other sectors where we want foreign investment of high quality with modern technologies. Our intellectual property laws are largely in conformity with international standards as reflected in the TRIPS Agreement of the WTO and other international conventions to which we have subscribed. Yet we tend to create an impression around the world that we do not value intellectual property or respect its adequate protection.

While protection and subsidization is not the solution, this huge disadvantage faced by the domestic industry requires to be addressed with priority and ways and means found to mitigate it.

To become a manufacturing nation, India has to quickly move with a pace on the created strategy and favorable policy environment for manufacturing to take off. Indian companies along with Chinese, Japanese, German, American and Swedish companies are all vital partners and we must create an environment that is open and welcoming. There is a clear window of opportunity to become a manufacturing nation. We must not miss the opportunity.

14th April 1891-  
14th April 2016



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# Departmental Information



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## Department of Computer Science and IT

### ■ Academic Programme offered by the Department :

Department is having M.Sc. (Computer Science), M.Sc. (Information Technology), M.Tech. (Computer Science and Engineering), M.Phil. (Computer Science), Ph.D. (Computer Science) and Ph.D. ( Computer Science & Engineering)

### ■ Innovative / Novel Research Achievements of the Department:

Department is recognized by University Grants Commission (UGC) and Department of Science and Technology (DST) Govt of India and hosting Prestigious programs

- SAP-DRS PHASE –II (Multimodal Biometrics)
- DIST-FIST (Remote Sensing)
- DST Srinivasa Ramanujan Geospatial Chair
- Faculties are funded by UGC & DST for their Research Project.

### Special events (International Conf./ National Conf./Workshop/Seminars organized )

- International Conference on Advances in Computer Vision and Information Technology 2007 (ACVIT-2007)
- International Conference of Microwave and Optics 2007 (ICMO-2007)
- 2nd International Conference on Advances in Computer Vision and Information Technology 2009 (ACVIT-2009)
- National Workshop in Data Warehousing and Data Mining 2010 (NWDWDM-2010)
- IEEE International Conference of Knowledge Engineering 2011 (ICKE-2011)
- National Workshop on Automatic Speech Recognition System 2011 (WoASR-2011)
- Workshop on "Integrating GeoSpatial Technology with e-Governance of an Indian District (IGST-2013)
- National Workshop on "Microwave Remote Sensing" 2014
- National Workshop on "Emerging Trends in GeoSpatial Technology for Smart City" 2014
- Pre Science Congress-2014 Conference on Science and Technology for Human Development
- Department organizes various program to nurture the potential of students and provide them platform to express their innovation through 'COMPUTER CLUB' activities. Program conducted under this forum includes
- Science Day Celebration
- University Open Day Celebration
- IETE Foundation Day In collaboration with IETE Sub Center Aurangabad
- Industrial Guest Lecture Series.
- GIS Day celebration



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### ■ Faculty members and their research ( Awards and recognition)

Faculties in department are working in the area of Human Computer Interaction, Remote Sensing and GIS, Multimodal Bio-metrics, Pattern Recognition, Digital Speech Signal Processing, Data Mining, Big Data Analytics, Natural Language Processing, Biomedical Image Processing, Computer Vision and various upcoming domain in the field of Computer Science and Engineering.

### Faculties who received awards are as follows:

Dr. R. R. Deshmukh: He visited Spain and received fellowship from PEIN. He is fellow member of IETE and Chairman of IETE Aurangabad Centre. Recipient of "BHARATRATNA MOTHER TERESA GOLD MEDAL" Award 2015 for extraordinary meritorious person for outstanding service in various fields – Health, Education, Research, Industry and Social Service to strengthen India's Unity and economic development. His profile has been published in Who's Who in World 32nd Edition. Won First Prize during Inter University State Level Research Festival "AVISHKAR-2009" under for Team Management and H.L.F.A. category at Teacher level.

Dr. S. C. Mehrotra: He is Srinivasa Ramanujan Geo Spatial Chair Professor. Recipient of Alexander Von Humboldt Fellowship, Germany; NASA Fellow, USA; FOM Netherland. He is Fellow Member of National Academy of Science, India and Fellow Member of IETE. He received Career Award in 1981 from UGC, State Level Ideal Teacher Award (2010-2011). He is UGC BSR Faculty Fellow.

Dr. K. V. Kale: Received "VIJAY SHREE" award with certificate of excellence for meritorious services By Indian International Friendship Society New Delhi, India. Received Awarded Plaque by Who's Who in the world, USA, Nov-2012. Received Amazing Idea Award during IEEE Science and Information (SAI) Conference 2013, London, UK, October 2013. He is Fellow Member of IETE.

Dr. B. W. Gawali: She received Ideal Teachers award (Adarsh shikshak puraskar)" on 5th Sept. 2014 - Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. She received "Shikshak Pratibha" award on 5th Sept.2009 by Department of Mass Communication and Journalism, Dr. B. A. Marathwada university, Aurangabad (MS), India. She is Fellow member of IETE.

Dr. S. N. Deshmukh: He visited Spain and received fellowship from PEIN. He is fellow member of IETE and Treasurer of IETE Aurangabad Centre

Dr. R. R. Manza: He received "Shikshak Pratibha" award and "Vidyaratana award". He is Fellow Member of IETE.

Dr. C. Namrata Mahender: Won First prize Inter University State Level Research Festival "AVISHKAR - 2009" under H. L. F. A. category at Teacher level.

### ■ Infrastructure facilities available for teaching/research.

Department is equipped with state of art infrastructure that appreciates research culture of the department. The Research infrastructure was developed through Major Research projects sanctioned to faculties of the department. The equipment's are like:

ASD-Field Spectra 4, EEG Machine, emotive BCI head set, CSL (Computerized Speech Laboratory),





PanOptic Retina Scanner, Micromic 520 and Multi Speech Model, Multi-Chandel AV Mixer, HDR Cameras, Fingerprint sensors, Plam Scanner, IRIS Scanner, Signature Scanner, etc.

■ **Research output of the Department ( Total number of Publications, total number SCI publications, total number of citations, average h-index of the Department):**

Total Publications			
Conference		Journals	
National	International	National	International
151	296	20	566

- Total number SCI publications : 251
- Citations : 4031
- h-Index : 8.38
- i -10 Index : 10
- Books published national/international : 25 books

■ **Sponsored Research Projects completed/ ongoing ( DST, UGC, DBT, CSIR, DAE, BRNS etc)**

Agency	Amount (Lacs)
	Ongoing/Completed
UGC	97.98 / 101.94
DST	245.65 / 19.02
CSIR	Nil
DBT	Nil
(AICTE+Govt. of Maharashtra )	3 / 8

■ **Patents and consultancies:**

- Nil

■ **MoU's / Collaborations:**

- Department had a MoU with NIELIT (National Institute of Electronics and Information Technology) for collaborative research

■ **Science and Technology/ Industry interaction Events:**

- The students of the department participated in State level Science festival 'AVISHKAR' and also won prizes under PG, Research and Teacher categories since 2010.

■ **Renowned Visitors ( National / International ):**

- Department have been visited by personality with national and international repute like
- Padmashree Vijay Bhatkar, Prithviraj Chavan, (EX-Chief Minister, Maharashtra State.), Prof M C



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Uttam Kumar, Dr. Anil Kakodkar, Dr. Naval Gund, Dr. Arun Nigvekar, Dr. Sarjerao Nimse, Dr. U S Tondon, Dr. K Murlimohan, Dieter Markanic and Peter Krauss from Endress+Hauser, Germany, Dr. Allen Bretto, France, Dr. Kankana Chakraborty, Australia, Dr. Pawan Lingras, Halifax University, Canada, Dilip Pithadia – Chairman Pithadia Foundation USA, Rajendra Pol – USA, Magne Jorgensen- Norway, Vinay Chawala – Europe and many more.

#### ■ Achievements (Students): National/International /Fellowships/Awards

Currently 53 students are working in the department having different fellowships or working as Project Fellows on Major Research Projects sanctioned by DST or UGC. Students are recipients of RJNF, MANF, BARNF, BSR, GATE stipend, SGS, University Scholar Fellowship and other fellowship schemes

#### ■ Notable Alumni of the Department (Beneficiaries : presently working on High Profile position) :

- Dr. Amol Goje- Director VIIT, Baramati
- Dr. Preeti Ramdasi -Senior Consultant, TCS
- Anup Kumar Baheti - NOVARTIS India
- Sachin Dadpe - Project Manager, AtoS
- Govind Lokhande - Scientist D, Institute of Plasma Research
- Suryakant Lokhande Project Manager, Accenture
- many students are observed with fortune 500 companies like Infosys, IBM, WIPRO, TCS, Symantec, Siemens, Cognizant Technologies etc

#### ■ Any other special information :

- Students are also shortlisted for Foreign fellowship under ERASMUS-MUNDUS European fellowship for their doctoral and post-doctoral research.
- Around 100 (Hundred) Students of the department are Awardees / Recipient of Various National Fellowships out of which 53 are currently working in the Department.
- Satellite Distance Education Program on Remote Sensing, offered by Indian Institute of Remote Sensing (IIRS), Dehradun since 2012.
- Department is offering four Masters Level Program as professional degree course designed to meet the requirement of industry
- UGC CPEPA (Center of Potential Excellence in Particular Area) theme entitled “Center of Excellence in Geo-Informatics Science” for financial Assistance of Rs. 99.3 Millions (Submitted to UGC, In Pipeline)
- Establishment of Reconfigurable Lab in association with IIT Powai and State Govt. of Maharashtra of Rs. 80.0 Lakhs (Awaited for Release of Grants)
- Collaborative Research Program with NIO (National Institute of Oceanography) and other are in pipeline.



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## Department of Statistics

### ■ Academic Programme offered by the Department:

- M.Sc. Statistics
- Ph. D. Statistics

### ■ Innovative / Novel Research Achievements of the Department: NIL

### ■ Special events (International Conf. / National Conf./Workshop/Seminars organized)

- Successfully organized INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN STATISTICS AND THEIR APPLICATIONS DURING 26-28 Dec., 2013
- On the Occasion of Open day on 21-22 August 2015 , the participants shown the video clips of Recent Research Trends in Statistics.
- Every year National Statistics Day(29 June) and World Statistics Day(20 October) celebrated in association with NSSO office, Government of India, Aurangabad.
- National Seminar on Recent Trends in Actuarial Statistics.
- Workshop on preparation of SET exam in mathematical science

### ■ Faculty members and their research ( Awards and recognition)

- Two senior faculties Prof Dr. S. L. Sananse and Prof.Dr. V. H.Bajaj are working on BOS and RRC of the Universities in India.
- Dr.A.Y.Tayade, Assistant Professor received Shikshak Pratibha Puraskar.
- Book written by Prof.VH.Bajaj and published by Lap Lambert publisher, Germany has been recorded in Miracles World Record.

### ■ Infrastructure facilities available for teaching/research.

- Under the UGC SAP DRS-I, well equipped Statistical Lab with 40 Computers and Latest Statistical Software is developed and is being used by the students.
- Departmental Library of Text books and Reference books is Established under SAP grants and being used by the students.
- Reading Room for the students is also developed under SAP and being used by the students

### ■ Research output of the Department ( Total number of Publications, total number SCI publications, total number of citations, average h-index of the Department):

- Total Publications : 177
- Total number SCI publications : 70
- Citations : 69
- h-Index : 04
- i -10 Index : 01
- Books published national/international : 10

■ **Sponsored Research Projects completed/ ongoing ( DST, UGC, DBT, CSIR, DAE, BRNS etc)**

Agency	Amount (Lacs)
UGC Sponsored Major Research Project on Yield and Price Risk in Crop Production for Social Security of Farmers in Marathwada Region of Maharashtra (Completed), PI: Prof. Dr. S.L.Sananse	Rs. 6.65 Lacs
UGC SAP DRS –I : 2012-13 to 2017-18 (Ongoing)	Rs.77.00 Lacs
Development and Usage of Ocean State Forecast sponsored by INCOIS, Govt. of India, Hyderabad ...(Ongoing)	Rs. 40 lacs

■ **Patents and consultancies: NIL**

■ **MoU's / Collaborations:**

- Collaborating National Sample Survey Organisation (NSSO), Govt. of India for training in field survey.

■ **Science and Technology/ Industry interaction Events:**

- Poster Presentation were organized by the Department on the eve of National Science Day

■ **Renowned Visitors ( National / International ):**

- Prof. SINGPURWALA, Chair Person of Risk Analysis and Management Science, CITY UNIVERSITY, HONG KONG
- Prof K.S. CHIN , Dept of System Engineering, CITY UNIVERSITY, HONG KONG. Visited this Department and Delivered Lectures. They also discussed about MOU between two Departments.

■ **Achievements (Students): National/International /Fellowships/Awards**

- Two students are awarded Inspired fellowship of DST New Delhi.

■ **Notable Alumni of the Department (Beneficiaries : presently working on High Profile position):**

- Prof. Dr. Thomas Varghese, Professor, Alberta University, Canada.
- Prof. L. A. Aziz, Professor, University of Behrin.
- Dr. A. M. Pedgaonkar, Chief Statistician, Reserve Bank of India.
- Dr. M.A.Khan. Registrar, Mumbai University, Mumbai.
- Dr. V. A. Padalkar, General Manager, Q. C. A. Garware Polyester, Aurangabad

■ **Any other special information :**

- Alumni meet is held every year.
- Campus interview are held on regular basis for placements of students.

**Prof. Dr. S. L. SANANSE**  
Professor and Head



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# Department of Mathematics

- **Academic Programme offered by the Department:**
  - M. A. / M. Sc. (Mathematics)
  - M. Sc. (Applied Mathematics)
  - M. Phil. (Mathematics)
  - Ph. D.
  
- **Special events (International Conf./ National Conf./Workshop/Seminars organized )**
  - Two day National Mathematics Day Programme
  - National Science Day Programme
  - Lectures by Prof. K. B. Patil under Lectures by Eminent Mathematicians programme
  
- **Faculty members and their research ( Awards and recognition)**
  - Some faculty members are Reviewers for American Mathematical Society's "Mathematical Reviews"
  - One faculty member has served as a Member of Book Writing Committee (for S. S. C. students) of Govt. of Maharashtra.
  - Some faculty members are members of Editorial Boards of various journals.
  - One faculty member is a member of Board of Studies of Mathematics in other university.
  
- **Infrastructure facilities available for teaching/research.**
  - Two computer labs
  - Departmental Library
  - Access to e-journals
  
- **Research output of the Department ( Total number of Publications, total number SCI publications, total number of citations, average h-index of the Department):**
  - Total Publications: 18 (during 2014- 2015)
  - Total number SCI publications:
  - Citations: 245
  - h-Index: 18
  - i -10 Index: 8
  - Books published national/international: Not Applicable
  
- **Sponsored Research Projects completed/ ongoing ( DST, UGC, DBT, CSIR, DAE, BRNS etc):**  
Not Applicable

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- Patents and consultancies: Not Applicable
- MoU's / Collaborations: Not Applicable
- Science and Technology/ Industry interaction Events: Not Applicable
- Renowned Visitors ( National / International ) : Prof. Uma Iyer (USA)
- Achievements (Students): National/International /Fellowships/Awards Not Applicable
- Notable Alumni of the Department  
(Beneficiaries : presently working on High Profile position):
  - Professor V. S. Kharat, Professor, Dept. of Maths., Savitribai Phule Pune University, Pune.
  - Professor G. S. Ladde, Professor, Dept. of Maths., University of Texas at Arlington, U. S. A.
  - Mr. A. K. Ambekar, General Manager, State Bank of India, Mumbai.
  - Several alumni are working as Teaching faculty in various Universities.
- Any other special information : Not Applicable

Professor and Head



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# Department of Chemistry (2010-2015)

- **Academic Programme offered by the Department:**
  - M.Sc. Chemistry: 72 + 24\* M. Sc. Course [Through Entrance Test ]  
\*Analytical Chemistry (Self-Supported Course)
  - Ph. D. Chemistry : 56 Ph. D. [Through NET, SET, GATE and PET]
- **Innovative / Novel Research Achievements of the Department:**
  - UGC-SAP- DRS Sponsored (Level I and II)
  - DST-FIST Sponsored (Level I)
- **Special events (International Conf./ National Conf./Workshop/Seminars organized )**
  - Three Science Academies Work shop on "Probing electronic states in molecules and molecular materials"
  - National Conference on Advances in Material Chemistry
  - International Year of Chemistry- 2011
  - Three Science Academies Work shop on "Fundamentals in Chemical Sciences"
- **Faculty members and their research ( Awards and recognition )**
  - Fellow of Royal Society of Chemistry (FRSC, UK), CSIR- Emeritus Scientist (2013-16) : Prof. M. S. Shingare
  - Govt. of Maharashtra, Ideal Teacher Award; Prof. M. S. Shingare and Prof. B. R. Arbad
  - UGC-BSR Faculty Fellow : Prof. T. K. Chondhekar (2011-14)  
: Prof. B. R. Arbad (2014-2017)  
: Prof. C. H. Gill (2016 -2019)
  - Indo-US Postdoctoral Research fellow USA (2013-2014), University Ideal Teacher Award : Dr. B. B. Shingate
  - Fulbright- Nehru Postdoctoral Fellow USA (2012-13), Young Scientist - DST-SERB and DAE-BRNS Govt. of India : Dr. B. R. Sathe
  - Chairman, State Eligibility Test (2007-09; Chemical Sciences) : Prof. R. A. Mane
- **Infrastructure facilities available for teaching/research.**
  - ICT Based Lecture Halls (05), P. G. Laboratories (12), Research Laboratories (05), Departmental Library with Network Facility (01)  
Major Equipments: UV- Visible Spectrophotometers, Potentio Galvanostat, Microwave Synthesizer, High Pressure Autoclave, HPLC and GC, Chemical Vapour Deposition, CHNS Analyzer

■ **Research output of the Department ( Total number of Publications, total number SCI Publications, total number of citations, average h-index of the Department):**

- Total Publications : 667 (Scopus)
- Research Publications (2010-2014) : 156 (SCI)
- Highest Impact Factor [Chemical Reviews ACS] : 46.58
- Total Citations : 5918 (Scopus)
- Average h-index : 10.90 (Scopus)
- No. of Ph. D (2010-2014) : 51
- i -10 Index : 25 (Average)
- Books published national/international : 01(International)

■ **Sponsored Research Projects completed/ ongoing ( DST, UGC, DBT, CSIR, DAE, BRNS etc)**

- | Agency     | Amount (Lacs) |
|------------|---------------|
| • UGC      | : 203.79      |
| • DST      | : 45.56       |
| • CSIR     | : 20.00       |
| • DAE-BRNS | : 17.00       |

■ **Patents and consultancies: Nil**

■ **MoU's / Collaborations**

- Wockhardt Pharma Ltd, Aurangabad (MoU 2013 Onwards)
- Rutgers, The State University of New Jersey, USA
- National Chemical Laboratory, Pune
- Indian Institute of Technology, Mumbai
- CDRI, Lucknow
- North Maharashtra University, Jalgaon

■ **Science and Technology/ Industry interaction Events: Nil**

■ **Renowned Visitors ( National / International ):**

- Prof. B. H. Kim, Prof. K. H. Anh, Prof. Jeong, Prof. Lee From South Korea
- Prof. Sasaki, Prof. Nishigawa, Prof. Shirai, Tokyo University, Japan
- Prof. Zhongwu Guo, Wayne state university, USA
- Prof. Ganesh Pandey (Director), Prof. Vijayamohan (Director), Prof. M. M. Salunkhe (Vice-Chancellor), Prof. N. N. Maldar (Vice-Chancellor)

■ **Achievements (Students): National/International /Fellowships/Awards**

- CSIR-UGC NET Qualified Students (2010-2014) : 135  
92 (JRF) & 43 (LS)
- CSIR-Shyama Prasad Mukherjee Fellowship (2012) : 02





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- **Notable Alumni of the Department (Beneficiaries : presently working on High Profile position):**
- Prof. D. B. Shinde (Vice-Chancellor)
  - Dr. Javeed Mukram, Dr. M. K. Dongare, Dr. B. M. Bhaval, Dr. Arun Deshpande, Dr. S. D. Shirpewar, Dr. Kiran Jadhav (Industrialist)
  - Prof. R. K. Kale (Former Vice-Chancellor)
  - Prof. Satish Patil (IISc Bangalore)

**Professor and Head**

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## Department of Physics

### ■ Academic Programme offered by the Department:

- M.Sc.
- Ph.D.

### ■ Innovative / Novel Research Achievements of the Department:

- Nil

### ■ Special events (International conf. /National Conf./Workshop/Seminar organized)

- Organized every year: 'University Open day' and 'Science Day'

### ■ Faculty members and their research (A awards and recognition)

- (1) Prof. R. B. Sharma – 12
- (2) Prof. K. M. Jadhav – 03
- (3) Prof. P. W. Khirade – 01
- (4) Prof. M. D. Shirsat – 14
- (5) Prof. V. V. Navarkhele – 05
- (6) Dr. S. S. Patil – 02
- (7) Dr. S.D. Deshpande - 11
- (8) Dr. B. N. Dole – 10
- (9) Dr. A. G. Murugkar – 01
- (10) Dr. P. P. Pawar – 03
- (11) Dr. P. B. Undre – 01
- (12) Dr. G. M. Dharne - Nil

### ■ Infrastructure facilities available for teaching / research.

- Clean room of class 10000 with e-beam evaporator, physical vapor deposition, chemical vapor deposition, chemical bath deposition, thermal evaporator, spin coater

### ■ Characterization facilities and Device fabrication Tools:

- (1) AFM with STM
- (2) FTIR
- (3) UV-Vis Spectrophotometers
- (4) TDR
- (5) IDDMS
- (6) SMU
- (7) ECEW – CH660C



- (8) Solar Simulator
- (9) Gas Sensing system
- (10) Electrical Measurement Material
- (11) WEST BOND wire bonder
- (12) Ecopia Probe Station
- (13) National MEMS Design Centre

■ **Research output of the Department (total number of Publications, total number SCI Publication, total numbers of citations, average h-index of the Department):**

- Total Publication:- 786 (11 Faculty Members)
- Total Number SCI publication:- 342 (11 Faculty Members)
- Citations:- 5175 (11 Faculty Members)
- h-Index:- 105(11 Faculty Members)
- I – 10 Index:-145(11 Faculty Members)
- Books published national / international

■ **Sponsored Research Projects completed /ongoing (DST, UGC, DBT, CSIR, DAE, BRNS etc) Last Five Years:**

- Total No. of Projects = 48
- Ongoing = 14
- Completed = 34
- Total Funds received = Approximately 10.00 crores

■ **Patents and consultancies:**

**Title of the invention:**

"A compound having a chemical formula  $A_xB_yC_zD_uE_vF_3$ , A composite made there from and a method of making the same"

Granted by : I. P. Australia, Government of Australia

Grant No: 2012101676 December 2012

■ **MoU's / Collaborations:**

■ **International:**

- (1) University of California, Riverside, CA, USA
- (2) Hanyang University, Seoul, South Korea
- (3) University of Wollongong, Wollongong, Australia
- (4) Arizona State University, Tempe, USA
- (5) University of Tokushima, Japan
- (6) University of Paris, France

■ **National:**

- (1) Bhabha Atomic Research Centre (BARC), Mumbai, India
- (2) Indian Institute of Technology (IIT), New Delhi, India
- (3) Inter University Accelerator Centre (IUAC), New Delhi, India
- (4) Delhi University, New Delhi, India
- (5) Tata Institute of Fundamental Research (TIFR), Mumbai, India
- (6) R. R.C.A. T. Indore, India
- (7) DAE-CSR, Indore, India
- (8) CEMET, Pune, India, other india Novel Instutite

■ **Science and Technology Events:**

- National and International Conference: 02, Other: 05

■ **Visitors (National / International):**

- International: Approximately 50 (from USA, Japan, South Korea, UK, France, Taiwan etc)
- National: Approximately 100 (approx.) ( from BARC, IITs, TIFR, BRNS, CSIR laboratories Universities etc.

■ **Achievements / Awards (Student):**

- |   |      |
|---|------|
| (1) NET/SET/GATE/JEST Qualified (2007- till date)         | - 11 |
| (2) UGC-Rajiv Gandhi National Fellowship (2014-till date) | - 03 |
| (3) UGC-Maulana Azad National Fellowship (2014-till date) | - 01 |
| (4) Post-Doc Fellowship (2007- till date)                 | - 05 |
| (6) Summer School at University of Tokushima              | - 03 |
| (7) Erasmus Mundus Scholarship- 2015                      | - 02 |

■ **Notable Alumni of the Department (Beneficiaries : presently working on High Profile position) :**

- Prof. D. G. Kuberkar, Professor, Saurashtra University, Rajkot

■ **Any other special information: Sensor devices, memory devices, low cost and higher stability superconductor and solar cell devices are under developing.**

Professor and Head



## Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

# Department of Botany

### ■ Academic Programme offered by the Department:

- M.Sc.
- Ph.D.

### ■ Innovative / Novel Research Achievements of the Department : Nil

### ■ Special events (International conf. /National Conf./Workshop/Seminar organized)

- XI international conference of International Organization of Plant Biosystematists was organized during 02 – 04 September 2010
- CSBI
- Organized every year: 'University Open day' and 'Science Day'

### ■ Faculty members and their research (Awards and recognition)

(1) Prof. A. S. Dhabe –02 (2) Dr. M. M. Sardesai – 03 (3) Dr. N. B. Pandhure – 00

### ■ Infrastructure facilities available for teaching / research.

- Reasonable space of about 2000 sq.m. that includes seminar hall, lecture halls, fairly well equipped laboratories, a photographic section, a tissue culture laboratory and a library. A botanic garden spread over 44 acres and a herbarium housing more than 80000 specimens being largest in its contents are bench mark in the departmental development.

### ■ Research output of the Department (total number of Publications, total number SCI Publication, total numbers of citations, average h-index of the Department):

- Total Publication:- 229 (07 Faculty Members)
- Total Number SCI publication:- 87(07 Faculty Members)
- Citations:- 542 (07 Faculty Members)
- h-Index:- 29(07 Faculty Members)
- I – 10 Index:-15(07 Faculty Members)
- Books published national / international: 22 books

### ■ Sponsored Research Projects completed /ongoing (DST, UGC, DBT, CSIR, DAE, BRNS etc)

#### Last Five Years:

- Total No. of Projects: = 9
- Ongoing = 2
- Completed = 7
- Total Funds received : Approximately 1.33 crores



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

- **Patents and consultancies :** Nil
- **MoU's / Collaborations:**
- **International:**
  - (1) International Association for Plant Taxonomy (IAPT), Vienna
  - (2) international Organization of Plant Biosystematists
- **National:**
  - (1) Botanical Survey of India, Kolkata (2) Indian Association for Angiosperms Taxonomy, Calicut, India (3) Shivaji University, Kolhapur, India (4) Delhi University, New Delhi, India
- **Science and Technology Events:**
  - National and International Conference: 03, Other: 00
- **Visitors (National / International):**
  - International: Approximately 60 (from USA, Japan, South Korea, Slovak, Czech Republic, Russia, Nigeria, Singapore, The Netherlands, Estonia, Italy, Yemen, Iran, Iraqetc)
  - National: Approximately 100 (approx.) (from BARC, IITs, TIFR, BRNS, CSIR laboratories Universities etc.
- **Achievements / Awards (Student):**
  - (1) NET/SET/GATE/JEST Qualified (2007- till date) - 08
  - (2) UGC-Rajiv Gandhi National Fellowship (2007-till date) - 08
  - (3) CSIR JRF & SRF - 01
  - (4) Golden Jubilee Scholarship of Dr. B.A.M.U. (2008- till date) - 08
  - (6) DST Inspire Fellowship - 01
  - (7) UGC National Merit Scholarship (2008- till date) - 03
  - (8) BARTI SavitribaiPhule Scholarship for Women - 04
  - (9) Project Fellowship – 08
- **Notable Alumni of the Department (Beneficiaries : presently working on High Profile position) :**
  - Prof. ShivajiraoKamble, Professor and former Head, Shivaji University, Kolhapur
  - Prof. AbhayHarsulkar, IRSHA, BharatiVidyapeeth Deemed University, Pune
  - Dr. B.G. Pawar, Additional Commissioner, Thane Municipal Corporation
  - Mr. RavindraParalikar, Depty Collector, Hingoli
  - Mr. RavikiranGovekar, IFS, National Tiger Conservation Authority, Govt. of India
  - Dr. BhagwanMundhe, Commissioner, Solapur Mupical Corporation
  - Dr. Priyanka Ingle, Scientist B, Botanical Survey of India, W.R. C., Pune
  - Mr. Arvind Patil, D.C.F., Nasik
- **Any other special information: Nil**

Professor and Head



## Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

# Department of Zoology

### ■ Academic Programme offered by the Department:

- M.Sc.
- Ph.D.

### ■ Innovative / Novel Research Achievements of the Department:

- New species erected from Protozoa, Helminthes and Arthropod phylum.

### ■ Special events (International conf. /National Conf./Workshop/Seminar organized)

- Organized every year: 'University Open day' and 'Science Day'
- Organized Pre Indian Science congress Association conference.
- Organized Farmers Scientists Meet for Sericulture.

### ■ Faculty members and their research (Awards and recognition)

Prof. C.J. Hiware (6) Prof. Y.K. Khillare (13) Prof. (Mrs.) M.U.Patil (3) Prof. D.L.Sonawane (53) Prof.A.N. Vedpathak (2) Prof. K.B. Shejule (2) Prof. S.P. Zambare (4) Prof.E.R.Martin (01) Prof.B.B.Waykar (7) Prof.K.R.reddy (1) Prof (Mrs.) S.R. sonawane (2) Prof.(Mrs) S.N.Borde (2) Dr.R.J.chavan (3) Dr.G.D.Khedkar (6) Dr.S.S.Mokashe (3) Dr. R.P. Chondekar(2).

### ■ Infrastructure facilities available for teaching / research.

Total number of class rooms	: 3
Class rooms with ICT facility	: 2
Students' laboratories	: 6
Research laboratories	: 21

### ■ Characterization facilities and Device fabrication Tools:

UV-Vis Spectrophotometers, Electrophoresis, Atomic Absorption Spectrophotometer(AAS), Photo imaging and analysis device, Auto tissue processor and stainer.

### ■ Research output of the Department (total number of Publications, total number SCI

Publication, total numbers of citations, average h-index of the Department):

Total Publication:- 292 (16 Faculty Members)

- Total Number SCI publication:- 292(16 Faculty Members)
- Citations:- 485 (16 Faculty Members)
- h-Index:- 114(16 Faculty Members)
- I – 10 Index:-119(16 Faculty Members)
- Books published national / international 16



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

- **Sponsored Research Projects completed /ongoing (DST, UGC, DBT, CSIR, DAE, BRNS etc)**  
Last Five Years:
  - Total No. of Projects: = 68
  - Ongoing = 11
  - Completed = 30
  - Total Funds received : Approximately 1,60,00000/-
- **Patents and consultancies: Apiculture and Sericulture consultancy provided Patent Nil**
- **MoU's / Collaborations:**
- **International:**  
(1)University of Santiago Compostala Spain. (2) Warsaw University of Life science Warsaw, Poland (3) Ambo University West ShoaAmbo,Ethiopia. (4) Ben Gurion University Of Negev, Isreal (5) Licoln University, New Zealand (6) Limoges University, France
- **Science and Technology Events:**
  - National and International Conference: 06, Other: 10
- **Visitors (National / International):**
  - International: Approximately 50  
(fromNewzeland,Ethiopia,Spain,USA,Thailand,Czeck,Israel,Canada
  - National:Approximately400 (approx.)  
( from Different Institutes, laboratories and Universities etc.
- **Achievements / A wards (Student):**
  - (1) NET/SET/GATE/JEST Qualified 03
  - (2) UGC-Rajiv Gandhi National Fellowship 10
  - (3) UGC-Maulana Azad National Fellowship 02 (7) Erasmus Mundus Scholarship-01
- **Notable Alumni of the Department (Beneficiaries : presently working on High Profile position) :**  
Dr.E.V.Muley Advisor Govt. of India Ministry of Environment & forest; Dr. A.D.Divan DDG fisheries Govt. of india., Dr. L.J Kanhekar Chief scientific officer malaria eradication Institute New Delhi. ; Dr. V.S Somwanshi, Ex Director general Fishery survey of India, Prof. D.V. Muley Registrar Shivaji University, Kolhapur; Mr. Chandrashekar Bhosale Ex-MLA, Dr. M.L.Jadhav, Registrar Pune University.;AshokKhadse regional Forest Conservator Maharashtra, Dr.Jawlikar and Bhatlawande Dy. CEO; Dr.Anant Ghavane Dy. Collector.,
- **Any other special information:Dept is known for invertebrate research and Center for Ocean Development previously Known as MRL, Ratnagiri. Funded by office of Naval Research,USA.**

Professor and Head





## Dr Babasaheb Ambedkar Marathwada University, Aurangabad

# Department of Environmental Science

### ■ Academic Programme offered by the Department:

- Department offered (PG) M.Sc. course in Environmental Science.
- Ph.D in Environmental Science

### ■ Innovative / Novel Research Achievements of the Department:

- The contribution of Dr.N.N.Bandela & Dr.Tare in the Municipal Solid waste management by developing pulp from MSW and converting the waste into the valuable product.
- The contribution of Dr.S.S.Patil & Dr.Dhulap by developing model of constructed wetlands using angular horizontal subsurface flow and angular horizontal subsurface zigzag flow pilot plants in sewage treatment plant.

### ■ Special events (International Conf./ National Conf./Workshop/Seminars organized )

- National conference on Hazardous Waste Management a priority issue.
- National conference on Advances in Pollution Control Technology.
- One day seminar on carrier opportunities in Environmental since.
- National Seminar on Industrial waste water Reuse recycle and zero discharge.

### ■ Faculty members and their research ( Awards and recognition)

Name	Designation	Area of Research
Dr. N. N. Bandela	Professor & Head	Ecology, Water & waste water Management and Environmental Biotechnology.
Dr. M.B.Mule	Professor	Pollution studies, Eco-toxicology and RS & GIS.
Dr. S. S. Patil	Professor	Biodiversity, Water pollution studies, LCA, EIA and Auditing.
Dr.B.L.Chavan	Associate Professor	Water pollution, Energy studies, Solid waste management
Miss Y.L Padme	Assistant Professor	Ecology, Water and waste water technol ogy.

### ■ Infrastructure facilities available for teaching/research.

- Class room cum laboratories with LCD projectors :- 02
- Teachers cabin with attached research laboratory :- 03
- Research and consultancy laboratory :- 01
- Preparation room :- 01
- Computer lab with internet facility :- 01
- Parmaculture Garden (Roll Model) :- 01



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

■ **Research output of the Department ( Total number of Publications, total number SCI Publications, total number of citations, average h-index of the Department):**

- Total Publications : 286 publication
- Total number SCI publications:
- Citations : 136
- h-Index : 10
- i-10 Index: 04
- Books published national/international
- National : 10 , International :01

■ **Sponsored Research Projects completed/ ongoing ( DST, UGC, DBT, CSIR, DAE, BRNS etc)**

Agency	Amount (Lacs)
• UGC	57,79,200
• DST	50,00,000
• CSIR	
• DBT	
• Any Other	10,00,000 (Govt. of Maharashtra)

■ **Patents and consultancies:**

- " A Method For Treatment Of Solid Municipal Waste To Obtain Pulp For Making Paper" by Dr.N.N.Bandela.
- "Ecological Sanitation approach in a constructed wetland using angular horizontal subsurface flow and angular horizontal subsurface zigzag flow pilot plant novel models" by Dr.S.S.Patil.

■ **MoU's / Collaborations:**

■ **Science and Technology/ Industry interaction Events:**

- Interacted with the industries on the topic "Industrial waste water Reuse recycle and zero discharge" during the conference in the department.

■ **Renowned Visitors ( National / International ):**

Name	Position
Dr. E.V. Muley	Ex-Director, MOEF, New Delhi
Dr. D.B. Boralkar	Ex-Member Secretary, MPCB, Mumbai
Dr. E.T. Puttaiah	Professor, Kyompu University, Shankarghata, Karnataka
Dr. D.B. Yedekar	Ex Vice-chancellor, SRTM University, Nanded.
Dr. D.S. Ramteke	Deputy Director , NEERI, Nagpur
Dr. Sanjeev kumar Goyal	Senior Scientist, NEERI , Nagpur.
Prof. Vikram Reddy	Head, Dept of Env.Sci, Pondicherry University, Pondicherry
Prof. Sanjay Deshmukh	Vice-chancellor Mumbai University, Mumbai
Prof. A.K. Raina	Head, Dept of Env Science, Jammu University, Jammu.
Dr.S. H.Pawar	Vice –Chancellor, D.Y.Patil University, Kolhapur

## Departmental Information



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad



### ■ Achievements (Students): National/International /Fellowships/Awards

Sr.No	Name of the students	Achievement details
1	I. Mr. A.M. Late II. Dr.Mrs.Godbole G.G	Golden Jubilee Research fellowship Project fellowship
2	I. Mr. I.B.Ghorade II. Mr. Pravin Nalawade	Project fellowship Project fellowship
3	I. Mr. S.H.Pawar II. Miss. Jyoti Koliyar	Project fellowship Best Paper Award in conference
4	I. Mr. Ganesh Rakh II. Mr. N.S.Sonawane III. Miss. Manali Bhale	Project fellowship Rajiv Gandhi National Research Fellowship Merit First in Env. Science
5	I. Mr. Omkar Jogdand II. Miss. Kiran Hamane	Project fellowship Merit First in Env. Science
6	Dr. Dilip Yardi	Appointed as Member Wildlife Board, Govt. of Maharashtra

### ■ Students participating in NSS

### ■ Student participation in Environmental Awareness programme

### ■ Notable Alumni of the Department (Beneficiaries : presently working on High Profile position):

Name	Position
Prof. Dr.S.T. Ingle	Director, School of Environmental Science & Earth Science, N.M. University, Jalgaon.
Dr. S.V. Shivanikar	HOD, Dept of Env.Sci, NSB College, Nande
Dr. A.B. Bhosale	Dept of Env.Sci, SRT M University, Nanded
Dr. Y.B. Sontakke	R.O.M.P.C.B. Mumbai
Dr. J.B. Sangewar	R.O.M.P.C.B.Mumbai
Dr. R.A. Rajput	S.R.O.M.P.C.B. Aurangabad.
Dr. Nitin Wagh	S.R.O.M.P.C.B,Nagpur
Dr. Tare D.G.	Scientific Officer, M.P.C.B.Mumbai
Dr. Darshan Deshpande	Manager, Pharmaceutical Industry Chiplun
Dr. Ambulge J.A	Assistant Director Workhard, R& D division, Aurangabad.
Dr. Tanaji More	Environmental Consultant, Pune



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Mr. T.V. Gude	Senior Scientific officer, M.P.C.B Aurangabad.
Mr. Ashok Kare	S.R.O, M.P.C.B.Kalyan
Dr. Jeevaraj Chaudhar	Fire and Safety officer, Garware Industries, Aurangabad.
Dr. Birajdar	R.O.M.P.C.B, Aurangabad
Dr. P.P. Munde	Field Officer M.P.C.B, Aurangabad
Dr. S.Tope	Field Officer M.P.C.B, Mumbai
Dr. Dilip Yardi	Hon. Wildlife Warden and Ornithologists, Aurangabad
Dr. Bhagwan Maknikar	Field officer M.P.C.B, Latur
Dr. Selvem Daniel	Director, ECOCERT, Aurangabad.
Dr. J. Ambulge	Assistant Director, Wockhard , Aurangabad.
Dr. Mukesh Naik	Head, Dept of Env. Science, Deogiri college, Aurangabad.
Dr. K.S. Khobragade	Head, Dept of Env. Science, S.B. Science college Aurangabad.
Dr. S.R. Thorat	Associate prof NMU, Jalgaon.
Dr. Satish Kulkarni	Head, Dept of Env.Science, ASC college, Ahemad Nagar.
Dr. Jay Patwari	Head, Dept of Env.Science, MU College, Udgir.

■ **Any other special information :**

- In-plant training for the students in industry.
- Consultancy services to the industry and society.

**Professor and Head**



## Dr Babasaheb Ambedkar Marathwada University, Aurangabad

# Department of Biochemistry

- **Academic Programme offered by the Department:**
  - M.Sc., Ph.D. Biochemistry.
- **Innovative / Novel Research Achievements of the Department:**
  - The Department offered Research projects are included as part of M.Sc. Curriculum in addition to purely research based Ph.D.
- **Special events (International Conf./ National Conf./Workshop/Seminars organized )**
  - Nil

### ■ Faculty members and their research (Awards and recognition)

#### Teacher Achievements

#### Dr. V. K. Hivrale (Professor & Head)

- 1) Received Vidyapeeth shikshak pratibha award from department of Mass communication, Dr BAMU.
- 2) Worked as post doctoral fellow at Max Planck Institute for chemical ecology, Jena, Germany for nine month April 2006 to January 2007.
- 3) Selected 2 times for DST Sponsored workshop on Biosensor
- 4) Short listed for Prestigious Marie Curie International Research Fellowship.
- 5) Award: Sir CV Raman fellowship (Singh-Obama fellowship)

#### Dr. M. M. Fawade (Professor)

- 1) Initiated proteomics studies as diagnostics and disease evaluation tool. and have used simple, reliable, low cost techniques like chromatography, electrophoresis etc to detect and quantify extremely acidic or basic, low abundance proteins.
- 2) Investigated antioxidant status in various type of people suffering in form type 2 diabetes.
- 3) Investigated an easy protocol using two simple solutions for DNA extraction from A. tumefactions cells. Compared to the standard protocol, this protocol allows rapid DNA isolation with comparable yield and purity at a negligible cost.

#### Dr. V. R. Shende :

- 1) National Heart Lung Blood Institute/ NIH, Bethesda, MD
- 2) Mount Sinai School of Medicine, New York, NY.
- 3) Albert Einstein College of Medicine, Bronx, NY.
- 4) Recipient

#### Dr. M. V. Padul :

- 1) Completed one month training programme on 'Recent trends in Molecular Biology'.



2) Completed ICAR NICHE area of excellence sponsored training on Utilization of Microbial and plant genomic resources for plant disease management.

■ **Infrastructure facilities available for teaching/research.**

Facilities	Details
Space	15,000 sq ft with seminar hall, e-class-rooms, conference room, teaching labs and research labs with modular furniture.
Major Equipment	Analytical balances, Chromatographic systems, Coagulometer, Cold centrifuges, Computers, Environmental chambers, Fermentors, GC, Gel densitometer, Gel documentation system, HPLC*, HPTLC, IEF, Liquid Scintillation Counter*, Lyophilizer, Microplate readers, MiliQ water, PCR, Protein and Nucleic acid Electrophoresis Units, Protein purification system, Rotophor, Miniprep, Research Microscopes, Scanners, Ultra-Cold storages, UV/Vis Spectrophotometers, Ultracentrifuge* * Instruments need minor repairs,
Computational Lab / Software	Two Labs with 35 N-computing terminals + server and 18 computers distributed in the department
Departmental Library	1. 300 text and reference books (Re-initiated this year) 2. Toxicology and drug metabolism reprint library (more than 2000 reprints, shifted to coworker's lab in UDCT)
Other facilities	Insect rearing facility, Animal cell culture facility (under development), Proteomics and Genomics Lab, Field plots for cultivation

■ **Research output of the Department ( Total number of Publications, total number SCI Publications, total number of citations, average h-index of the Department) :**

Research output of the Department	Total
Total Publications	128
Total number SCI publications	139
Citations	808
h-Index	21
i -10 Index	16
Books published national/international	Nil

■ **Sponsored Research Projects completed/ ongoing ( DST, UGC, DBT, CSIR, DAE, BRNS etc)**

Agency	Amount (Lacs)
UGC	55,00,000/-
DST	22,00,000/-
CSIR	--
DBT	--
ICMR	59,00,000/-
University of Pune	2,00,000/-



## ■ Patents and consultancies:

- Nil

## ■ MoU's / Collaborations:

- 1) Department of Biochemistry & Molecular Biology, OSU, USA.
- 2) IISER, Kolkatta
- 3) JNU New Delhi.
- 4) Tezpur University, Aasam.
- 5) ICRISAT, Hyderabad
- 6) NCL, Pune
- 7) Dept. of Chem. Tech. Dr. B. A. M. U. Aurangabad
- 8) Dept. of Biochem. Shivaji Univ. Kolhapur
- 9) Dept. of Biochem. Ahmednagar College.
- 10) National Chiao Tung University, Taiwan.

## ■ Science and Technology / Industry interaction Events:

- Every year Department is actively participating in arranging science day & open day programme in Department.

## ■ Renowned Visitors ( National / International ):

- 1) Professor, Richard Goodman, Nebraska University, Nebraska, USA.
  - 2) Ales Svatos, Max Planck Institute for Chemical Ecology, Hans-Knöll-Straße 8, D-07745 Jena.
  - 3) Asaph Aharoni, Department of Plant Sciences, The Weizmann Institute of Science, Rehovot76100, Israel.
- Every year Department has invite one international scientist for talk that provided opportunities to the students for interaction.

## ■ Achievements (Students): National/International /Fellowships/Awards

### Students Achievement

Name	Achievement Details	Year
Mr. Keshav Shinde	Erasmus Mundus Ph.D. Programme at Spain.	2015-16
Mr. Lavhale Santosh	NET	2015-2016
Mr. Somase Rahul	DST Inspire Fellowship	
Ms. Ashwini Sirsat	BARTI Fellowship	
Mr. Satishkumar S. Tekale	University Scholar Fellow	
Mr. Sandip K. Wagh	Ph.D. Inspire Fellowship	2012-2013
Mr. Sachin Bhutekar	NET	



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

■ **Notable Alumni of the Department (Beneficiaries : presently working on High Profile position):**

Name	Position	Name	Position
Dr. J. M. Patel	Sr. Professor	Dr. S. J. Makhija	Professor
Dr. A. M. Mungikar	Professor	Dr. Dharwadkar	Professor
Dr. Jahir Khan	Professor	Dr. Rafat Hashmi	Professor
Dr. Z. H. Khan	Professor	Mr. Subhash Lomte	Social worker
Dr. Shashi Amur	Professor	Mr. Jadhav Rajesh	Sqdrn Leader
Dr. H. V. Adikane	Scientist F	Dr. Saya Patil	Biochemist
Dr. A.P. Giri	Scientist F	Ms. Adiambo	Social worker
Dr. S. N. Prasad	Scientist F	Dr. Bhosale N. N.	Scientist
Dr. K. R. Gawai	Professor	Dr. Gayal	Scientist
Dr. B. L. Jadhav	Professor	Dr. J. G. Shewale	Chief Scientist
Dr. S. P. Govindwar	Professor	Dr. A. N. Suryakar	Registrar

■ **Any other special information :**

- Nil

**Professor and Head**  
Department of Biochemistry





## Dr Babasaheb Ambedkar Marathwada University, Aurangabad

# Department of Chemical Technology

- **Academic Program offered by the Department:**
  - Ph. D. program
  - M. Tech. (Chemical) Drugs & Pharmaceuticals
  - B. Tech. (Chemical) Pharmaceuticals & Fine Chemicals Technology
  - B. Tech. (Chemical) Food Technology
- **Innovative / Novel Research Achievements of the Department:**
  - Patents: 04 (First department on the campus to offer the patent)
  - Publications: 270 (National/International), Average 20 publications per year
  - Recipient of DST FIST supported department
  - Recipient of DST Fasttrack Scheme for Young Scientists
- **Special events (International Conf./ National Conf./Workshop/Seminars organized )**
  - National Conference- NCPA-2011 & NCPA-2013
  - Workshops- Flash Chromatography- 2010, HPLC workshop-2006
  - Training Programs- In association with FDA-2012
- **Faculty members and their research (Awards and recognition)**
  - DST Fast Track Scheme for Young Scientists (Dr. S. S. Bhusari)
  - UGC BSR Fellow (Dr. D. B. Shinde)
  - DST MOFPI Research Scheme (Dr. B. K. Sakhale)
- **Infrastructure facilities available for teaching/research.**
  - Sophisticated Analytical Instrumentation Facility- 01
  - Engineering Workshop- 01
  - Basic Science & Engineering Labs- 18
  - Drug Design Lab- 01
  - Food Pilot Plant- 01
- **Research output of the Department ( Total number of Publications, total number SCI publications, total number of citations, average h-index of the Department):**
  - Total Publications: 270
  - Total number SCI publications: 270
  - Citations: 2275
  - h-Index: 8.1
  - i -10 Index: 8.1
  - Books published national/international: 03
- **Sponsored Research Projects completed/ ongoing ( DST, UGC, DBT, CSIR, DAE, BRNS etc)**

Agency	Amount (Lacs)
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Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

• UGC	79.74
• DST	113.00
• CSIR	15.00
• DBT	19.13
• Any Other	134.00
<b>Total</b>	<b>360.87</b>

## ■ Patents and consultancies:

- 04 (Indian Patents)

## ■ MoU's / Collaborations:

- Wockhardt Pvt. Ltd.

## ■ Science and Technology/ Industry interaction Events : NIL

## ■ Renowned Visitors ( National / International ):

- Hon. Chancellor of Maharashtra
- Hon. VCs of Shivaji, Jalgoan, Nagpur, Solapur, Nanded University
- Hon. Minister- D. P. Sawant (Ex-Minister), Janardhan Waghmare (Ex- Member of Parliament)
- Eminent Scientists- Dr. M. M. Sharma (ICT, Mumbai), Dr. R. A. Mashelkar (CSIR, New Delhi), Dr. Saranjit Singh (NIPER, Mohali),
- Dr. Jag Khalsa (US FDA), Dr. Chris Nando (UK)

## ■ Achievements (Students): National/International /Fellowships/Awards

- Senior Research Fellowship by ICMR
- Best TB Awareness Program Award by ICMR
- Poster Presentation Award by VIT
- Elocution Award by Indian Science Congress

## ■ Notable Alumni of the Department (Beneficiaries: presently working on High Profile position):

- Dr. B. S. Kuchekar (Principal, Pune)
- Dr. S. S. Bahekar (Entrepreneur, Aurangabad)
- Dr. M. R. Jadhav (Industrial Consultant, Aurangabad)
- Dr. Vivek Peche (Associate Professor, Germany)
- Dr. Rahul Barhate (Scientist, R&D, Cadbury, India)

## ■ Any other special information :

- Catering of Analytical Services to Industries and Academia
- Engineering Workshop Facility to various departments in campus
- ISO 9001 - 2008 Accredited Department

**Head**

Department of Chemical Technology



## Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

# Department of Nanotechnology

- **Academic Programme offered by the Department:**
  - M.Sc.
  - Ph.D.
- **Innovative / Novel Research Achievements of the Department:**
  - Nil
- **Special events (International conf. /National Conf./Workshop/Seminar organized)**
  - Organized every year: 'University Open day' and 'Science Day'
- **Faculty members and their research (A awards and recognition)**
  - (1) Prof. R. B. Sharma – 12
  - (2) Infrastructure facilities available for teaching / research.
    - Physical vapor deposition, chemical vapor deposition, chemical bath deposition, thermal evaporator, spin coater
- **Characterization facilities and Device fabrication Tools:**
  - (1) AFM with STM (2) FTIR (3) UV-Vis Spectrophotometers (4) TDR
  - (5) IDDMS (6) SMU (7) ECEW – CH660C (8) Solar Simulator (9) Gas Sensing system
  - (10) Electrical Measurement Material (11) WEST BOND wire bonder
  - (12) Ecopia Probe Station (13) National MEMS Design Centre
- **Research output of the Department (total number of Publications, total number SCI Publication, total numbers of citations, average h-index of the Department):**
  - Total Publication:- 150 (1, Faculty Members)
  - Total Number SCI publication:- 100(1, Faculty Members)
  - Citations:- 1384 (1, Faculty Members)
  - h-Index:- 22(1, Faculty Members)
  - I – 10 Index:-41(1, Faculty Members)
  - Books published national / international
- **Sponsored Research Projects completed /ongoing (DST, UGC, DBT, CSIR, DAE, BRNS etc)**

Last Five Years:

  - Total No. of Projects: = 04
  - Ongoing = 01
  - Completed = 03
  - Total Funds received : Approximately 50.00Lakhs



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

- **Patents and consultancies: Applied for publications**
- **MoU's / Collaborations:**
- **International:**
  - (1) Hanyang University, Seoul, South Korea
  - (2) University of Tokushima, Japan (6) ICTP, Trieste Italy
- **National:**
  - (1) Bhabha Atomic Research Centre (BARC), Mumbai, India
  - (2) Indian Institute of Technology (IIT), New Delhi, India
  - (3) Inter University Accelerator Centre (IUAC), New Delhi, India
  - (4) Delhi University, New Delhi, India
  - (5) Tata Institute of Fundamental Research (TIFR), Mumbai, India
  - (6) R. R.C.A. T. Indore, India
  - (7) DAE-CSR, Indore, India
  - (8) CEMET ,Pune , India, other india Novel Instutite
- **Science and Technology Events:**
  - National and International Conference: 01,
- **Visitors (National / International):**
  - International: Approximately 10 (from USA, Japan, South Korea, UK, France, Taiwan etc)
  - National: Approximately 50 (approx.) ( from BARC, IITs, TIFR, BRNS, CSIR laboratories Universities etc.
- **Achievements / A wards (Student):**
  - (1) UGC-Rajiv Gandhi National Fellowship (2014-till date) -02
  - (2) Post-Doc Fellowship (2015- till date)-01 (2) Erasmus Mundus Scholarship- 2015-02
- **Notable Alumni of the Department (Beneficiaries : presently working on High Profile position) :**
  - Dr. Abhay Sagde ,Scientist, Cam. University, London , UK.
- **Any other special information: Sensor devices, memory devices, low cost and higher stability super conductor and solar cell devices are under developing.**

Professor and Head



## Dr Babasaheb Ambedkar Marathwada University, Aurangabad

### Department of

### Deen Dayal Upadhyay KAUSHAL Kendra

- **Academic Programme offered by the Department:**
  - Bachelor in Vocation: Industrial Automation, Automobile
  - Diploma in Vocation: Industrial Automation
- **Innovative / Novel Research Achievements of the Department: NA**
- **Special events (International Conf./ National Conf./Workshop/Seminars organized ): NIL**
- **Faculty members and their research ( Awards and recognition)**
  - Dr. M.D. Shirsat, Ph. D, PDF (USA), M.Sc. (Physics), M.C.A. [ Director]
  - Dr. Kunal Datta, Ph.D., M.Sc. (Physics)
  - Mr. V.D.Ushir, M.Tech. (Mechanical Engineering)
- **Infrastructure facilities available for teaching/research.**
  - Industrial Automation Lab, Automobile Workshop, Drawing Hall, I.C. Engine Lab, PLC Lab, Process control and control systems lab, Instrumentation lab, Basic electrical machineries lab, Language Lab, Internet Lab.
- **Research output of the Department ( Total number of Publications, total number SCI publications, total number of citations, average h-index of the Department):**
  - Total Publications: 247
  - Total number SCI publications: 142
  - Citations: 1163
  - h-Index: 8
  - i -10 Index: 11
  - Books published national/international - 01
- **Sponsored Research Projects completed/ ongoing ( DST, UGC, DBT, CSIR, DAE, BRNS etc) :**

The ongoing Bachelor in Vocation (B.Voc), Diploma in Vocation (D.Voc) and proposed Master in Vocation (M.Voc; from academic year 2016-17) are University Grants Commission (UGC), New Delhi sponsored programs.

The Centre has received grants of Rs. 1.67 crores under B.Voc scheme, Rs. 83.00 lakhs from Community College Scheme and Rs. 4.00 crores under KAUSHAL scheme of UGC



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

- **Patents and consultancies:** NIL
- **MoU's / Collaborations:**
  - NAC Group of Industries, Aurangabad
  - Krish Automation, Aurangabad
  - Luans Electronics, Aurangabad
  - Maruti Auto Care Center, Aurangabad
- **Science and Technology/ Industry interaction Events:**
  - Meetings with Industry collaborators regarding syllabus making
  - Invited talks by Industry experts
  - Regular theory lectures and hands on training by industry experts
  - Onsite training of one month for Industrial Automation students at Narshimha Group of Industries, Aurangabad ( 2013-14)
  - Onsite training of fifteen days for Industrial Automation students at Laxmi Udyog, Aurangabad ( 2014-15)
  - Onsite training of fifteen days for Industrial Automation students at Krish Automation, Aurangabad ( 2015-16)
  - Onsite training of fifteen days for Automobile students at Maruti Auto Care Center, Aurangabad ( 2015-16)
- **Renowned Visitors ( National / International ):**
  - Jillian Leigh Gross, University of Michigan
  - Dr. P. Koinkar, University of Tokushima, Japan
- **Achievements (Students): National/International /Fellowships/Awards:** NIL
- **Notable Alumni of the Department  
( Beneficiaries : presently working on High Profile position):** NA
- **Any other special information :**
  - Purely Skill based Programs
  - Full emphasis on hands on training
  - Adapted Choice based credit system and Continuous assessment

Director



# Central Facility for Advanced Research and Training (CFART)

**Prof. Dr.Satish S.Patil**

Director

Dr. Babasaheb Ambedkar Marathwada  
University, Aurangabad.

**Vision : Creating Spirit of Scientific Excellence In Academics And Industries.**

**Mission : Facilitating creation of Scientific Excellence amongst industry /students/ faculty by providing state of art services through committed manpower and managerial capabilities of individuals.**

**Objectives :**

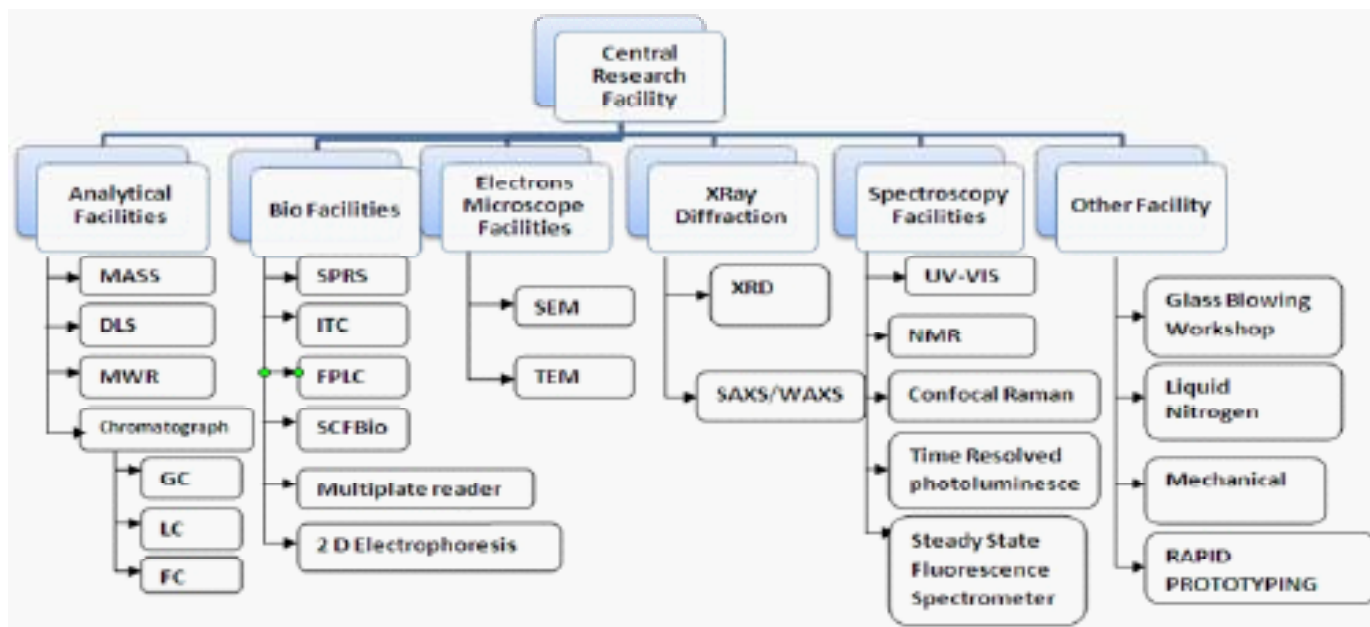
- To provide state of art analytical services and high end instrumentation at a single location.
- To provide services through qualified personnel for supporting research carried out by UG PG Ph D & Project students.
- To provide need based consultancy services to Industry & Institutions.
- To provide IT facilities for all.
- To arrange trainings on the use and applications of Spectroscopic and analytical techniques for students, teachers, and personnel from the other laboratories and Industries.

## List of Equipments available with CFART

1. LCMS (Mass Spectrometer): Applications: 1) Quantitative analysis  
2) Qualitative analysis 3) Impurity profiling 4) Metabolie studies 5) Pharmacokinetics  
6) Pharma and biomedical applications
2. SEM (Scanning Electron Microscope):Jeol JSM 6510 with EDS.  
Applications: 1) Material Science/ Metallurgy 2) Biological Science  
3) Nanotechnology 4) Ceramics 5) Pharmaceuticals 6) Semiconductors
3. HPLC (High performance thin layer Chromatography) Applications: 1) Qualitative &  
Quantitative analysis 2) Impurity profiling 3) Metabolic identification 4) Pharmacokinetics  
5) Pharma & Biomedical applications 6) Proteomics
4. DTG Shimadzu DTG-60: Applications: 1) Compositional analysis  
2) Decomposition and Transition temperature 3) Filter content 4 )Heat of transition 5)  
Measurement of volatiles 6) Oxidative and Thermal stabilities.
5. Ion Chromatography: Applications :1. Metal analysis at low level  
2. IC method development 3. Trace metal analysis
- 6 : AAS (Atomic Absorption Spectrophotometer): Applications:  
1. Rock, Soil, Fly ash (Composite analysis) 2. Environmental sample analysis (Air, Water, Soil  
etc.) 3. Biological samples (Urine, Tooth, Bone etc.) 4. Polymer industries 5. Pharmaceutical  
measures
7. UV-Vis Spectrometer Jasco V-530: 1. Normal Spectrum Qualitative & Quantitative analysis

8. X-ray diffractometer :1. Power XRD
9. SCFE/C: Applications: Chiral separations and super critical extractions

### List of various central facilities to be provided



- Analytical facilities
- Bio-facilities
- Electron Microscope facilities
- X ray diffraction
- Spectroscopy facilities
- Stability Chambers
- FPLC (Fast Protein Liquid Chromatography)
- SCF bio
- ITC
- Multiplate reader
- 2DElectrophoresis
- Other facilities
- E- Library, Modelling, Software development etc.

#### Analytical Facilities

- MASS (Mass Spectrometer)
- DLS (Dynamic laser scattering)
- MWR (Multiplate reader)
- CHROMATOGRAPH
- GC (Gas Chromatograph)
- LC
- FC (Flash Chromatography)





APPLICATIONS: Qualitative analysis, Quantitative analysis, Impurity profiling , Metabolite studies, Pharmacokinetics, Pharma & biomedical applications etc.

Bio- facilities: SPRS (Surface Plasmon Resonance Spectroscopy), ITC (Isothermal Calorimetry), FPLC (Fast Protein liquid chromatography), SCF Bio (Super computing facility for Bioinformatics), Multiplate reader , 2 D Electrophoresis Applications: All Biological Analysis.

### Electrons Microscope facilities:

- SEM (SCANNING ELECTRON MICROSCOPE EVO 50)
- TEM

### X-Ray Diffraction:

- XRD
- SAXS/WAXS

Applications: Qualitative identification of elements including

S, P, F, Cl, Br & I, Quantitative analysis of elements, Geological, Environmental, fly ash, sediments and material science.

### SPECTROSCOPY FACILITIES

UV- VIS (UV-Vis- Absorption Spectrometer)

NMR (Nuclear Magnetic Resonance Spectrometer)

Confocal raman , Time resolved photoluminescence

Steady state Fluorescence Spectrometer

Applications: Synthetic Organic and Inorganic chemistry, Bio Organic and Inorganic chemistry, Polymer, Organic metallic chemistry, For generating pulse sequence, Structural information of a molecule etc.

### Other facility:

- Glass Blowing workshop
- Liquid Nitrogen
- Mechanical
- Rapid Prototyping
- Stability Chambers
- E-library
- Modeling, Software development etc.

### CFART`S APPROACH FOR SERVICES

#### General Guidelines

1. As per Govt. rules Service Tax (14%) will be charged on the analysis charges.
2. The analytical data/spectra are provided only for research/ development purposes. These cannot be used as certificates in legal disputes.
3. The charges recommended above are for all industries including small, medium and Large Scale Industries.
4. No sample will be analyzed without advance payment.
5. Please obtain sample analysis confirmation (SAC) code before submitting the sample for analysis. Mention this SAC code on the analysis request form. Call # Or # for obtaining the SAC code.



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6. Unstable and explosive compounds are not accepted for analysis.
7. Services are rendered to only those users who regularly give us feed-back about the end-use of the results, e.g., patent, process, publication, thesis etc.
8. Research fellows and students are advised to send their application and samples through their Supervisor or Head of Department. The request should be on University / College / Institute head letter.
9. Interpretation of spectra is not undertaken normally. In special cases this service can be provided on payment of extra charges.
10. Samples and payment should be sent preferably in the same cover. Separate samples should be sent for different analysis.
11. Radioactive material should be clearly mentioned and handed over personally.
12. It is also desirable that analysis work done in SAIF facilities should be duly acknowledged in the publications/thesis and a note in this regard may kindly be sent to this Centre voluntarily to update the information.
13. The charge will be 50 % more if analyses are to be performed on priority basis (results can be delivered though e-mail).
14. The charges will be 25 % more if normal spectra results are to be delivered by e-mail.
15. Please add postage charges of Rs 50 if results are to be delivered by courier/post.
16. The sample name / batch no / required analysis should be clearly mentioned on sample / requisition form.
17. CFC reserves the right for acceptance, analysis and supply of reports.
18. All operations and services of CFC will be bound by confidentiality practices

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Registration , Internal users : students/faculty of campus

External users: Other University and colleges

Corporate users: Industry and Institutions

Payment: DD in favor of The Registrar, Dr Babasaheb Ambedkar Marathwada University.

Appointment

Sample submission

Results

#### SERVICES AVAILABLE

50% discount is offered on these services for Educational Institutes/Universities.

\* 25% discount is offered on these services for Educational Institutions/Universities.

\*\* Fixed charges (no discount is offered on these services).

Note: Visiting Charges: Rs.500/- per visit per Lab (Those who wants to visit the CFART lab)

Charges given are normal charges for sample analyses.

All Communications should be addressed to:

**Prof. Dr.Satish S.Patil**

*Director,*

Central Facility for Advanced Research and Training  
Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Phone No: 0240-2403266, Cell No: 09422707261



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad



## Chamber of Marathwada Industries & Agriculture

Chamber of Marathwada Industries & Agriculture is an association having the membership from most of the leading industries, organizations and individuals who are working for the cause of industries, industrialization and the overall development of Marathwada region for the last 39 years. The key persons (Directors, owners) / senior executives from the leading Industries & institutes are the members of this organization.

By the process of evolution and assuming broader role, today's CMIA has close association with national bodies such as CII, FICCI, ASSOCHAM, etc and has carved out very special place for itself by acting as a catalyst for spurring the growth of industries in Marathwada region. CMIA has been initiators of many of the ideas which resulted in development of present day.



Infrastructure bring Marathwada and particularly Aurangabad to leadership position in industrial growth and give it a place of pride amongst developing regions of India. Recommendations made by CMIA are treated with respect at all levels of Industries Associations, State and Central Government bodies. CMIA membership represents the entire cross section of Industries and Industries Association in the region of Marathwada, which includes Aurangabad, Jalna, Parbhani, Nanded, Beed Latur and Osmanabad. CMIA is committed to bring growth, prosperity and better quality of life to all the residents of this region.

This region has always been one of the focal points in any business houses marketing strategy. The agrarian economy of the region has nourished a thriving business community and a vast upper middle class population. Moreover, the high literacy level and the spread of information and knowledge amongst the populace present the right segment to be approached.

CMIA operates from its office in Aurangabad the city which has always enjoyed the distinction of being the economic capital of this region. Almost all the centers of this region by and large depend on Aurangabad for supply of information, transportation and goods. In a true sense, for this region Aurangabad is the window to the world and for the world, Aurangabad is the gateway to this region. More than 12 lacs people make this city abuzz with activity right from Dawn to Dusk. This city is also famous for its peace loving tolerant society – a basic need for any business to prosper. All these make Aurangabad any businessman's choicest location to have business association with and a ready market on threshold of economic outbreak.



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# CLEAN INDIA - AN ENVIRONMENTAL SCIENCE, ENGINEERING AND TECHNOLOGY PERSPECTIVE

In response to the clarion call given by Hon'ble Prime Minister Narendra Modi for Swachh Bharat (Clean India), on last year Gandhi Jayanti, the Nation witnessed a wave of enthusiasts wielding the broom. On 2nd October 2014, the launch of the mission was followed by Prime Minister flagging off a walkathon at Rajpath. This Mission, Swachh Bharat Abhiyan, was launched with Gandhiji as the inspiration, to create a Clean India of Gandhiji's dreams by the Mahatma's 150th birth anniversary in 2019. Swachh Bharat Abhiyan refers to clean India campaign initiated by the Prime Minister of India. The basic objective of Clean India Mission is to achieve the path of cleanliness and hygiene all over India. Implementing the Swachh Bharat mission, also called Clean India Mission will be an important step towards the further development of India.

Linking cleanliness to tourism and global interest in India, the Prime Minister said world-class levels of hygiene and cleanliness are required in India's top fifty tourist destinations, to bring about a paradigm shift in India's global perception. The Prime Minister has invited ideas from people on the design of Mission Swachh Bharat.

Swachh Bharat Mission is the utmost way to achieve greatness and success in many spheres of life as well as boost the economy of the country.

26 Slogans on Swachh Bharat Mission To Help Us With Our Homework.

As an individual few good things can contribute to clean India mission. It includes home composting, implementation of green technologies like or shifting 2 stroke engine vehicle to 4 stroke engine LED bulbs, recycling of plastics avoiding recalcitrant compounds etc. i.e. applying Reduce, reuse and recycle principle be the responsibility of modern civilized Indian

Using sustainable energy sources can help making India clean and green. Also implementing green construction, developing green technologies like using enzymes for tanning or paper bleaching etc would contribute in making India Clean India green India.

**Dr. N.N. Bandela**

Professor & Head

Dept. of Env. Science,

Dr. B.A.M. University, Aurangabad



## Digital India

The Digital India project aims to ensure that the Government's services are available to citizens electronically and help people by reducing paperwork. The best part of this initiative being it will also connect rural regions and remote villages ensuring that they too have high-speed Internet services. The project was launched on July 1, 2015 and is expected to be completed by 2019. Government aims to invest Rs. 1 lakh crore in the project. This project has three core components namely creation of digital infrastructure, Delivering services digitally and Digital literacy.

There are nine pillars of Digital India Programm i.e. Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance – Reforming Government through Technology, eKranti - Electronic delivery of services, Information for All, Electronics Manufacturing, IT for Jobs and Early Harvest Programmes.

The Government aims to promote e-Governance through a centralized initiative to the extent necessary, to ensure citizen centric service orientation, interoperability of various e-Governance applications and optimal utilization of ICT infrastructure/ resources, while adopting a decentralized implementation model. Public Private Partnerships will be initiated for implementation e-Governance project with adequate management and strategic control.

Thus, as can be seen, India is on the path to embracing digital technologies and reaping the ensuing benefits especially in the areas of broadband expansion, electronics manufacturing, and e-Governance and citizen services delivered electronically. The implementation of the Digital India program will help the country in overcoming our challenges, seizing our opportunities and providing citizens with access to better infrastructure and quality of life.

The government's Digital India vision inspired various IT giants like CISCO to unveil the implementation like Cisco Smart City in Bangalore in September 2014 to demonstrate what can be possible when the nation is digitized. Cisco's 2.6 million square foot campus-as-a-city enables thousands of our employees to work, play and learn with the physical network infrastructure securely connected to devices such as sensors, information access points and mobile devices. Considering this case study, our Honorable Vice Chancellor sir has also supported the proposal of all IT industry in Aurangabad to make our University Campus a Smart University Campus. In this project University and IT industry will work hand in hand to make a model of smart university campus. We are determined to be a model of smart campus so that the Aurangabad city could march towards a smart city,

## SKILL INDIA

The Indian philosophy, from ancient time, has believed in dissemination of knowledge that enables an individual to be self-reliant through acquired knowledge. Skill building can therefore, be considered to be a part and parcel of Indian education ethos from time immemorial. However, due to lack of sincere attitude towards this modality of training, the stand of vocational or skill based education in India was going through a phase that had got nothing to be encouraged with. At the same time, an independent study by Boston Consulting Group, USA estimates that with an expected population of 1.3 billion by 2020, 60% of which would be in the working age group (15-59 years), India is the powerhouse of the coming decade. By 2020, India will have a surplus of active population - about 47 million people. This is almost more than all the rest of those countries with net positive growth combined. However, if the quality of workforce is not maintained, there will be a demand supply gap 82-86% in 24 key sectors in the core professions. As a matter of fact, today total pool only 25 % of available human resource is capable of being used by the market.

Skill impartation can be viewed as an instrument to improve the effectiveness and contribution of human resource to the overall production. As per the new initiative taken by Hon'ble Government of India to utilize the human resource and empower the youth in various sectors through National Skill Development Mission, about 500 million people by 2022 will be trained to fight with the problem of unemployment. Modi's "Skill India Mission" is one such initiative that plans to train sufficient workforce in the near future. Currently, 22 ministries are providing skill development training in India at different levels. But they are not able to meet the industrial requirement for skilled manpower. To facilitate match making between the supply and

demand side of talent supply chain; an important step is frequent communication between the two sides. This requires initiatives like internships, training programs etc. where both the talent supply and the jobs providers interact.

Year 2020 for our country India, with dreams of promises, is definite going to bring with it, hurdle of challenging time. A young "to-be employed" population on one hand with jobs that have a demand for "skilled" workforce on the other will be the common picture of highest concern, as on today's perspective.

Things have to be handled cautiously; frame of curricula that are being taught through ages has to be revisited. More implication should be impounded on application sectors, with a clear conscience that without sound theory base, no skill can excel. The youth seems to have relived from the keenness of acquiring knowledge. They have to be brought back to the mainstream. Once the hunger is developed, knowledge will have automatic inflow. It must be remembered that necessity initiates innovation. Likewise, unless one is not acquainted with the real necessities of hour, the sense of skill acquiring will only remain as a project. The entire academia has to think seriously, whether to embrace this changing face of education or not. Hurdles are aplenty, along with students, the trainers and faculties need to readjust their mindset, they should improvise the methods of disseminating education to achieve the real ecstasies of the same.

All production, maintenance and allied sectors, may it be government or private, has to contribute



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immensely to this 'maha-yagna' towards creation of a self-sustained India, that not only takes care of her own necessities but also stands as a workforce supply to the entire world. They should come up with their necessities and requisites at human resource sector, so that the same could be incorporated in the training process. They should also be compassionate towards giving opportunities to the young blood and put faith on them. Undoubtedly, the skilled young workforce, will fumble at the beginning, but they have the capability to cope up and strengthen themselves, with the passage of time.

Finally, while talking of skill based India, we must not only look at the corporate of technical sectors. We need to foster the rural capabilities of India as well. If the rural strength is properly nourished and given proper market opportunity, surely, a new dawn will find its own way. This sector must not be ignored.

Fulfilling social commitments, has been the in the veins of the philosophy of Dr. Babasaheb Ambedkar Marathwada University, Aurangabad and with futuristic steps like DeenDayalUpadhyay KAUSHAL Kendra, programs through Earn and Learn Scheme, we are ready to build the future India.

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## Major Programmes

- Remarkable work in watershed
- Drip Bank
- Tribal Development Programme
- Centre for Sustainable Livelihood (CSL)
- Farmers Group Movement
- Mission for Women Groups
- CSR with many companies
- Resource Institution (RI) in Agriculture
- Pioneering in Monitoring & Evaluation Organization
- Dilasa Manovikas Foundation



## Dilasa Janvikas Pratishthan

B-3, Sudarshan Park, Vedant Nagar, Near MIDC Regional Office, Aurangabad-431005, Maharashtra. (India)  
 ☎ (0240) 2320444, 2363741. Email : dilasango@gmail.com, Website : www.dilasango.org

### Our Vision

To act as facilitator for improvisations in adaptability of different techniques in rural community while committing ourselves for upliftment of environmental, social and economic status for generation of sustainable livelihood through Natural Resource Management.

**Dilasa** is an organization dedicated for the rural development. Presently, it is working in 3664 villages of Marathwada, Vidarbha and North Maharashtra Region and has its head office in Aurangabad. Dilasa has established its offices in Nashik, Akola and Osmanabad along with a strategic office at Pune. Altogether, Dilasa is working in water and livelihood sector in 24 districts of Maharashtra.



### ACHIEVEMENTS



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Head Office – Plot No 12, Near CIDCO N-7 Post Office, Aurangabad.

Mobile No – (+91)8805000263 Email – mapariinfr@gmail.com

Phone/Fax No – 0240-2477577



## Bageecha Events, Catering, Canteen, Restaurant & Lawn

An international team in Aurangabad first time thriving impressions for food lovers to pamper and satisfy their test buds by introducing gastronomy in different way in food world. Bageecha Events is proud to present itself as the well known service provider for various events. We have been able to establish ourself among the leading names in the industry with the help of our excellent services.

### Garden Restaurant

Lavish green 1.5 acres of wide lawn, garden restaurant at Padgegaon, Aurangabad is the key of our successful journey in hospitality business. We are serving since last 22 years, having hospitable and attentive staff right from waiters to Chef are well trained and honed with professional experience. We offer variety food menu from A la Carte to table d'hôte and variety of beverages. Separate 'Family' section for kids, families and small parties. One should must try at once!



**Kerron Vaishnav**  
Managing Partner

Studied and worked in national and international collage and five star hotels, more then 12 years of experience in catering and hotel management.

- ✓ New Zealand - Hotel Management Education
- ✓ Auckland City Council, New Zealand - General Manager Certification
- ✓ New Zealand - Metropolis Residences, Former Duty Manager
- ✓ MGM IHM Aurangabad - Former Head-Food Production



**Sanjay Arjundas Dawarani**  
Founder & Proprietor

He Has More than 22 Years of experience in Providing Good & Best Quality Catering Services to the ultimate consumers.

Address : N-1, Cannought place, CIDCO, Aurangabad  
Phone : 9890000955 / 8554007777  
Email : bageechahotel@gmail.com,  
kerronvaishnav@live.com

### Services We Offer

- Event Management
- Party organisers
- Wedding Planning services
- Fashion Show organisers
- Indoor/Outdoor catering
- Mess/Canteen Services

### Our Client

- Videocon, Sterlite
- Bajaj Auto LTD, Nath Seeds
- Nandlal Dooth Hospital
- MGM Hospital
- Medical College
- IDEA Cellular
- Govt. Polytechnic, Aurangabad
- Greeves Cotton
- MAX New York Life Insurance
- Good Year Tyres
- Aditya Biral Group Companies (MINAX)
- Zilla Parishad Aurangabad & Aurangabad University
- NIELIT, (C-DAC) Aurangabad

भारतरत्न डॉ. बाबासाहेब आंबेडकर यांच्या १२५ व्या  
शतकोत्तर रौप्य महोत्सवी वर्षानिमित्त हार्दिक शुभेच्छा!

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मा. श्री. नवपुते दामोदर हरिभाऊ

व्हाईस चेअरमन

व सर्व संचालक मंडळ

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(विधानसभा अध्यक्ष, महाराष्ट्र राज्य तथा कार्यकारी अध्यक्ष व  
व्यवस्थापकीय संचालक, छ. सं. रा. सा. उ. लि.)

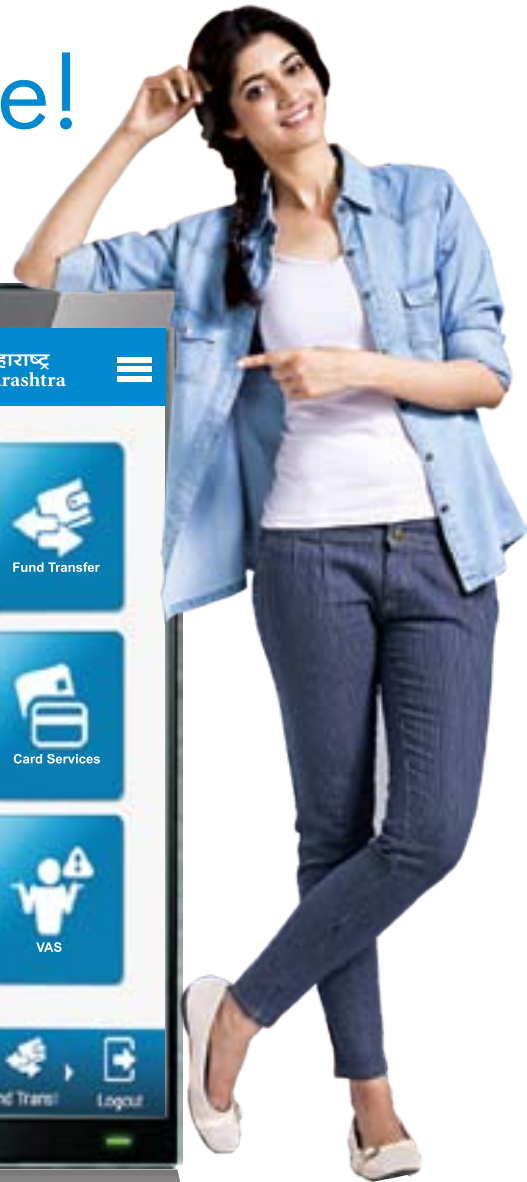


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**Banking**

- Balance Enquiry
- Mini statement



**Card Services**

- Apply for debit/ credit card
- Reset ATM PIN
- Block debit card



**Fund Transfer**

- Transfer to own account
- Transfer to other accounts
- Transfer to other bank a/c with NEFT
- View/add/modify/delete beneficiaries
- Transfer to other bank a/c with IMPS



**Service Request**

- Search past transactions
- A/c statement request
- Cheque Book Request
- Cheque Status Enquiry
- Stop Cheque
- Demand Draft Request
- Open new a/c



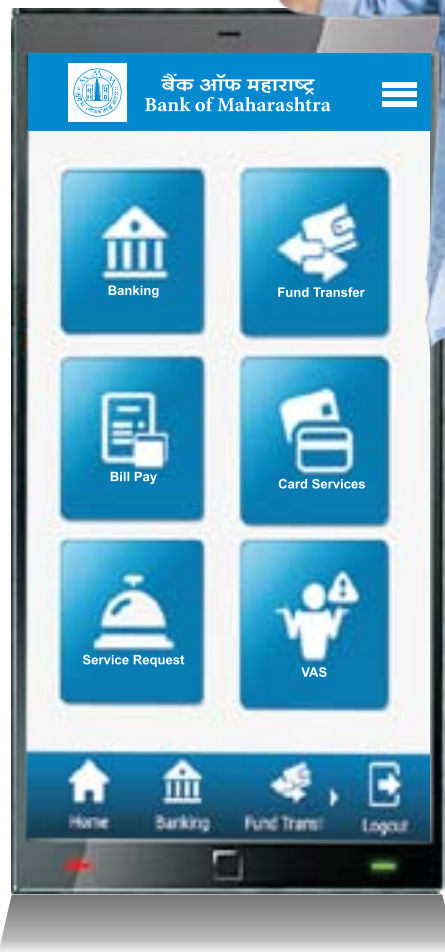
**Bill Pay**

- Add Billers/Instant Pay
- Delete Billers



**VAS**

- Log Complaint
- Mobile Passbook
- Change MPIN & MTPIN



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३० वर्षाचा..  
ठेवा विश्वासाचा..  
ध्यास उत्कर्षाचा...

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Electronics & Communication  
Electronics & Telecommunication  
Mechanical Engineering  
(Extra Division Direct IInd Year )

### Engineering (P.G.)

Mechanical Engineering  
Computer Science & Engg.  
Electronics & Telecommunication  
Structural Engineering

### MBA

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Finance  
Production & Operations  
I.T.

- Secured Integrated campus with hostel facilities in the heart of Aurangabad City.
- Record of Rank I result in Dr.B.A.M.University
- Well qualified, experienced and dedicated faculty
- Well stacked library with e-journals such as Elsevier and j-Gate
- Regular guest lecturers from industry experts.
- Total industries visited for campus in 2014-15 more than 50

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