

MAHARSHI KARVE STREE SHIKSHAN SAMSTHA'S

CUMMINS COLLEGE OF ENGINEERING FOR WOMEN

An Autonomous Institute Affiliated To Savitribai Phule Pune University

MECHANICAL EXPRESS



2015-2016, ISSUE #4



Faculty with Non Teaching Staff



MECHANICAL EXPRESS TEAM

Dr.Ravindra Ingle and Prof.Poonam Bhore

Lower line (from left): Deepti, Priyanka, Prajakta, Suchismita, Tejal, Alfareeza

Middle line (from left): Shweta, Tanvi W, Kranti, Rucha, Nutan

Upper line (from left): Tanvi B, Sucheta, Aishwarya, Juilee, Amruta



Faculty with Workshop Staff

TOPPERS



Maitrayee Patil,
BE



Ajithakumari
Kaimal, TE



Vaishnavi
Radkar, SE

SPORTS ACHIEVEMENTS



Unnati
Korgaonkar



Pallavi Dhake



Pallavi
Ghatnatti



Chaitali
Gawade



Sheryl Daniel



Olivia Jose



Priyanka
Chavan

INDUSTRIAL VISIT



NSS ACTIVITIES



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WORD FROM HOD

It gives me exceptionally great pleasure in writing departmental report in the Silver Jubilee Year of our institute. The mechanical department is now on the verge of completing 9th year of its growth. Many new things have happened in this silver jubilee year. At the beginning of the odd semester many students from third year completed their internship from renowned industries. During the internship, the students have learnt professional ethics, built confidence through hands-on work and have been exposed to the work culture in industry.

During the Silver Jubilee Year celebration function, Hon. HRD Minister Mrs. Smruti Irani spoke very enthusiastically about the need of women's involvement in industry and corporate. Her talk was very inspiring and realistic and every member of the institution paid great attention to it.

For every subject of SE-BE Mechanical, the department has organized guest lectures by eminent industry experts. As a part of curriculum, maximum number of industrial visits have been organized with an objective to provide more exposure to the students. This has helped the students in placement activity. The placement of present batch of 2015-16 is good. The placements of passed out students in core industry as well as multinational companies were also good. I have observed that, the participation of students in curricular and extracurricular activities are enhancing day by day. The faculty's involvement in departmental activities and development of laboratories is also enhanced. This would be the key success of the department in future. The National Board of Accreditation will visit the department probably in the month of July-2016. Since college is going to be an Autonomous from AY 2016-17, the status of NBA will play vital role in student's cut-off.

Dr K Rajan, Director and Outstanding Scientist, ARDE (DRDO), Pashan interacted with the students and faculty with full of enthusiasm and information. The topic for the interaction was "Role of Armament in Defense". His presentation was highly informative. It accurately pointed out the role of defense sector in serving the Nation. He showed the actual videos of the testing of PINAKA missiles carried out at Pokhran. It was a really wonderful experience for everyone in the department.

This year, under the ASME students' section, the ASME chairperson and her Team successfully carried out ASME project completion. From this year the department has taken initiatives in conducting Forbes Marshall Best Project Competition for BE Mechanical students. The objective in organizing those competitions is to make the students aware of the good innovative projects for the industry and society which may lead to process of filing the Patent in future on their work. The department is looking forward for starting of PG Course in Mechanical Design and Research Centre.

This time Team Zenith-BAJA 2016 fabricated a car with drastic reduction in its weight. This is a great achievement for the team.

The department shows in Gandhar and technical events in Innovations were successful due to teamwork, integrity, positive attitude and enthusiasm of students and faculty of the department.

A message to all final year students – be a part of the department, interact and share your experiences with the juniors for the betterment of the department, become an active alumni member, after passing out from this institution. **Also try to participate in Make in India campaign as entrepreneur women engineer in future and support the Nation.** ALL THE BEST to the students in their pursuit of an academic Degree at the department.

WORD FROM THE TEAM

Dear readers, it gives us immense pleasure to present you the fourth edition of the Mechanical Express. We would genuinely like to thank our college and our department for trusting us with this opportunity. Coming up with interesting reading material, photos and fillers was a monumental task that our team has successfully accomplished. This year we have some cutting edge articles from the field of aerospace and science. We have focussed on the having an interaction with people who have been doing distinguishing work. This interaction is documented in the form of Interviews. We hope that these interviews and articles pave way for inspiration to our readers to excel in the domain. Our team has worked tirelessly to make this edition of the magazine a great success. We would like to thank Prof. Poonam Bhore for guiding us throughout the entire process.

We hope that you find this issue informative and inspiring.

Happy reading!!

- Mechanical Express Team

DEPARTMENT VISION

To be recognized as a centre for quality education to develop women professionals in Mechanical Engineering

DEPARTMENT MISSION

1. To impart knowledge and skills in the field of Mechanical Engineering
2. To develop Mechanical Engineers with Professional ethics, who will respond to the current and future needs of Society through academic, industrial, and research activities
3. Develop facilities for higher education and promote research activities

**AMERICAN SOCIETY OF
MECHANICAL ENGINEERS (ASME)
- KRANTI GUNALE**

About ASME:

ASME is a membership organization that enables collaboration, knowledge sharing, career enrichment, and skills development across all engineering disciplines. It was founded in 1880 and now ASME has grown through the decades to include more than 130,000 members in 151 countries. From college students and early-career engineers to project managers, corporate executives, researchers and academic leaders, ASME's members are as diverse as the engineering community itself. ASME serves this wide-ranging technical community through quality programs in continuing education, training and professional development, codes and standards, research, conferences and publications, government relations and other forms of outreach.

Cummins Student's Section:

On the occasion of 25th anniversary of the college, Cummins College of engineering started its first ever ASME Student Section in September 2015 in Pune and now it is growing rapidly. Cummins student's charter has around 100 members, which also includes members who are handling the organization in the college being a chairman, two vice-chairmen, a secretary and a treasurer. This is the platform for the students to show their talents, develop their personalities through various activities and improve knowledge.

Programs conducted under ASME:

Different activities and guest lectures have been conducted in the year 2015-2016 under ASME student's charter.

1) On 15th January, 2016, a guest lecture was arranged by ASME members on the topic 'Opportunities in defence sector'. The chief guest was Mr. Rajan, Director ARDE and DRDO.

2) On 5th February 2016, a session was held by collaboration of ASME Cummins Students Section and Planetears environmental club on 'Steps to make Cummins College Plastic Free', where all the participants got the e-certificates. The main mission of the session was to save paper and plastic. The session started with the lecture, and then quick contest called Technodumbs was conducted. The session ended with the distribution of e-certificates.

3) ASME Cummins Student's Section also conducted an ANSYS workshop for two days that was held on 15th and 16th February, 2016. Mr Karan Bandwar from ARK InfoTech solutions was the trainer of the workshop. He gave us a brief idea about simulation techniques. Everyone enjoyed the session a lot.

ASME is looking forward to initiate more and more activities.

So join ASME and take a step towards your development.

SURVIVING A PLANE CRASH- NOW A POSSIBILITY

- SUCHISMITA DAM

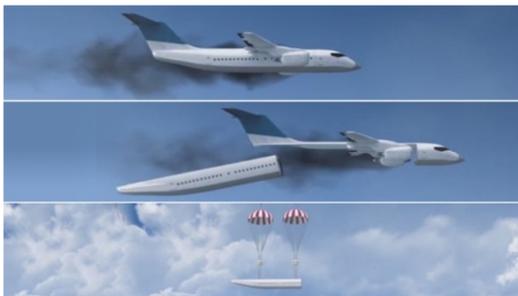
Safer technologies and smart materials have contributed a lot in bringing down the fatalities in airways from 1138 deaths in 1999 to 898 in 2015. However still there are a very few or no incidents of passengers having survived a plane crash.

Ukrainian aviation engineer, Vladimir Tatarenke has been working for over 3 years over this problem. He devised a method in which the passengers along with their luggage can be transported to the ground or sea in case of an emergency. The patents #88319(19) and #144783RU owned by Vladimir mention the above method. Such a method has been previously used in fighter jets with slight variations but it was devised with only one passenger in mind.

What actually happens:-

In case of emergencies the detachment of the cabin is controlled from the control room. Once detached, two gunpowder engines slow down the speed of the falling cabin and the parachutes are deployed. This causes the whole cabin to safely land on the ground. Also inflated rubber tubes can keep the cabin afloat if it lands on a water body.

The cabin is ejected through a rear hatch at the tail end of plane during take-off, flight or landing.



On a questionnaire conducted by the inventor, he found that 95% of people would be willing to pay more for such a safety system. This method also has some discrepancies in it, like the detachable cabin would undermine the structural integrity of the plane. Also if the plane explodes, this method would be of no use. The method doesn't include the safety of pilots. Research is going on in minimizing these defects so as to make travelling by plane the safest option for commentators.

Biomedical Innovation

This year three students of T.E. Mechanical, Gandhali Kelkar, Vaishnavi Radkar, Juilee Deshpande, started their journey as mechanical engineers in the field of biomedical innovation.

They attended a 5 day workshop in IIT, Bombay where we learnt the basic rules of Biomedical Instrumentation as Engineers of Various disciplines and also came to about IP laws and visited the Gait Analysis Lab, Tata Memorial Hospital, Mumbai. They learnt about the history of how Engineers and doctors have struggled in the past to solve a medical challenge and how things have been made easy for us by BeTic.

During this journey these students also visited the Hospital and Medical College at Dervan, Chiplun a place where needy people are offered free of cost Healthcare. Here the students took part in one its kind Biomedical Expo where they could showcase their innovations in the field of biomedical innovation in front of eminent personalities like Dr. Anil Kakodkar.

Currently they are working under BeTic, a collaborative incubation centre by IIT Bombay, COE Pune and VNIT, Nagpur where engineers of all disciplines come to together and contribute towards finding a solution to various challenges face in the medical industry.

BEST OUTGOING STUDENT INTERVIEW



- JUILEE DESHPANDE

This year, the Mechanical Department chose Priyanka Deo as the Best Outgoing Student for the year 2015-16. Following are the excerpts from an interview with her.

Congratulations on being awarded as the Best outgoing Student from our department for this year. Tell me what do you think is the differentiating factor that got you this award?

Thank you so much. I am very fortunate to have won it from a pool of extremely eligible nominees. What I think got me this award, apart from attending various national conferences and publishing papers, is my never give up attitude. I believe in completing the task at hand. I also believe in contributing whatever little that I can, to the society.

How do you think the four years of engineering moulded you as a person?

Well, in first year I was a shy girl who thought too much about what people would say if I failed, before taking up any new course or activity. Slowly because of the motivation from my seniors, I started doing different workshops and exploring fields of my interest. Thanks to the encouragement given by our entire staff, my family and friends, at the end of the four years I can voice my opinions and have a direction in life. Even though the four years of college went by too quickly, every year helped in developing the leadership skills in me. Every person I met here offered a new and

interesting take on things which helped me learn and develop in every aspect.

Since we are talking about colleges, tell me what do you think is the difference between other colleges and Cummins?

Firstly I would like to say I am very fortunate to have studied here because after coming here I learnt that Engineering is not just about the everyday routine of college. It actually helps you in making the world a better place to live in. Secondly, I have been across many colleges in the country and one difference I have prominently noticed is that, here we get many opportunities, but nothing is ever handed to us on a silver platter. In the testing times, our staff and everyone around us make sure we work hard, exploit our full potential and achieve what we deserve. Cummins is a college where we can see open and honest interaction between the staff and the students. We are trained to think and fight hard to give the best possible solution for any given problem. As a college, Cummins aspires to improve continually and in my opinion we are doing a fine job here.

Tell me who is your idol from our Department?

Every person here is so diverse, that you cannot help but learn so many things from each one of them. First person is N.R. Patil sir. It is from him that I learnt the importance of being prepared to tackle any problem that arises and to never complain, come what may. He has been instrumental in shaping my idea of what helping people in difficult times is. He has always urged us to make the optimum use of the resources available to us. Then, it is Divekar sir. He taught me the importance of being cautious about micro-details and being particular in any activity that you take up. From him I have learnt that a successful engineer will give due credits to other people for their work, where ever they are due. Another simple but peculiar lesson that I learnt from

him was “No matter what, follow your heart for it knows what you really want”. This helps me in almost all of my decisions. Chandekar sir is a person who has brought immense experience from the west. He always strives to make us understand the importance of thinking straight and logical. I remember, whenever the students went to him with a doubt, he would give us an indirect answer in the form of a direction to think, which would lead us to the answer. On this path of finding the answer, we would also come across new facts which were previously unknown to us. Rujuta ma’am is one person from whom I have learnt to remain true to my roots. She has taught me the power of simplicity. All these lessons which I have learnt, will stay with me forever and continue to inspire me. These lessons have formed a strong foundation, building on which, I hope to walk the path of success.

That is really inspiring. So Priyanka, tell me are there any regrets from these four years?

Not many (laughs). I feel since I opened up to the college late in my second year, I missed out many activities from my first year. That just made me learn the importance of time.

Now that we are talking about time, tell me how do you manage time?

I believe as an engineer from a country where every year so many of us graduate with the same degree, it is not what we do in the college that matters, but instead what we do with the little time we have at home is what defines us. And that is what I try to do always. I try to stand out by working when others are sleeping. Instead of reading the Vogue or watching T.V., I read something interesting from my favourite field i.e. aviation. With this it is also very important to do the things that define you. I read a lot because reading helps you form your opinion about things and thus lends a helping hand in our all-round development. Lastly, something we should never forget is that we need family and friends in our life through thick and thin. So never miss out on spending time with them.

I really hope to follow that too. Finally, what message would you like to give your juniors?

Work hard and never restrict yourself. Grab every opportunity to learn more. Be punctual and respect the opinions of the people around you. And lastly, don’t forget to have fun in these four years, because trust me; they pass in a great jiffy!

DID YOU KNOW...??

- Polar bears can eat as many as 86 penguins in a single sitting.
- An average person’s yearly fast food intake will contain 12 pubic hairs.
- A toaster uses almost half as much energy as a full-sized oven.
- You cannot snore and dream at the same time.
- Recycling one glass jar saves enough energy to watch TV for 3 hours.
- Facebook, Skype and Twitter are all banned in China.
- 95% of people text things they could never say in person.
- The Titanic was the first ship to use the SOS signal.

DEPARTMENT SHOW

- AMIT RAJURKAR SIR

Gandhaar 2016 had an evening reserved for the department show. Our department show was based on the theme “Evolution of Indian Television”. Students from BE and TE conceived, conceptualized and were also instrumental in writing the entire script. They did an amazing job. The evolution of television since its inception was shown in the form of an awards show. As it is with such shows, nominations were announced and awards given to famous personalities and with it was the usual song and dance routine. A storyline was developed and the students of TE. The BE students role played famous characters. It was an amazing experience to see famous characters such from hit serials such as Tulsi, Mihir, Abhijeet, Maya etc come alive on stage because of the fabulous performances by students.

Advertisements and dances were performed and enacted on the title songs of famous serials.

The contribution of faculties was immense to make the show a success. Some faculties displayed their hidden talent by strumming the guitar and also by mouthing the famous dialogues on stage. I wish to sincerely thank all those who shed their inhibitions and participated shoulder to shoulder with the students in the show, boosting their morale.

It was a team effort that contributed to the show being successful.

Heartfelt thanks to the team of Mechanical Express for giving me this platform to express my thoughts.

INTERESTING FACTS ABOUT AIRPLANES

- The wings of the airplane are just one component of flight. There are actually four forces of flight that push the plane up, down, forward, or slow it down. These four forces of flight are lift, thrust, drag, and weight.
- The oxygen in an airplane’s emergency oxygen masks lasts for only about 15 minutes.
- One windshield or window frame of a Boeing 747-400’s cockpit costs as much as a BMW.
- The world’s fastest airplane is the Lockheed SR-71 Blackbird, flying at 2,193 miles per hour. It has held the record for nearly 40 years.
- The tires of a Boeing KC-135 jet tanker’s landing gear consist of 8 main gear wheels and two nose wheels. This is enough material to make 100 automobile tires.
- The world’s largest passenger airliner, the Airbus A380, has about 4 million parts.
- Research shows that the first 3 minutes after takeoff and the final 8 minutes before landing are when 80% of plane crashes happen.
- In 1986, a plane called Voyager flew all the way around the world without landing or refueling

BHOOSHAN KELKAR SIR'S INTERVIEW

- RUCHA KELKAR

Tell us something about the early days of your career

I am originally a chemical engineer. Then I went to UK on a scholarship and did my masters in 'Process Control 'and eventually ended up getting a Ph.D. in Fuzzy controls i.e. Neuro-electronics. Post Ph.D., I spent 4 years at a start-up in California and we got bought out by GE (General Electric) in 2000 and therefore I shifted to IBM.

What was the nature of your work in IBM?

I would say I did four things-1)Pushing, Data mining in O Lab 2)Healthcare and Bioinformatics for about 6 years 3) Intellectual Property at IBM India and South Asia 4)Country Manager for University Relations. So I moved from software to services to intellectual property so legal and then HR (Human Resources).This was possible because IBM is a matrix company and one could move between divisions easily.

How do think are the IITs different from the other colleges?

Again, I would say there are two or three different things. First, I think, is the raw material. Looking at the difficulty of the entrance exams, you either need to be brilliant or hardworking. Second thing is the faculty. Most of them have doctorates from Foreign Universities and are accomplished in their areas. They are into research and have done many publications. And the third is that being an autonomous institute there is a lot of freedom as far as the entire structure of the course is concerned. The fourth thing of course is the brand value. When you walk into a

room and you say you're from IIT, there is always some pre-assigned credibility.

What do you think about Women in Mechanical Engineering field? And how do you think is society taking it?

Many a times there are a few men-only jobs in Engineering and they can be outsourced. So ultimately it's just applying your practical knowledge and for that you can be a man or a woman. Women are able to multitask and they are at least more sincere. So I think Women in Engineering is not a show stopper. Maybe in some cases they bring a lot of value which only men cannot do. There is a notion that especially Mechanical engineering is not for women because it's a man's world. When it comes to society, there is still some stigma. But it's changing nowadays. Companies are now focusing on recruiting Women in Mechanical sectors.

How did you get into consultation?

When I was in IBM, I always contemplated that I would leave IT field and go into consultation because I would say I really like to work in Education Sector. Education is very important and it's for people who like to interact with other people. I like to tackle problems of different age groups both technical and non-technical. And I discovered that I was enjoying it. There comes a point in your career when you say that this what you like then why not do it full time? So follow your dreams and also get paid for it.

What do you think about current education scenario in India?

There is lot of room for improvement. I think the biggest shortcoming is, with all due regards to our teachers, the quality of teachers. Most of the times it happens that people who teach are teaching because they cannot be absorbed into industry and if these people are teaching then the students are not going get the best knowledge which

is otherwise easily available in the Universities from West. There are very few people who have knowledge and are willing to teach. So the biggest bottleneck is faculty. This is the main reason I wanted to join this field.

How did you get associated to our college?

When I was a Country Manager for University relations in IBM I used to come here for negotiating a day for recruitment. Your TPO (Training and placement officer), Rohini Mulay Ma'am, had invited me a couple of times to give a lecture on how to write an effective Resume. I mentioned to her that I'm thinking of leaving IBM .So she offered me this signature project. A presentation was given to the Cummins India Ltd. and our sessions started within 13 days. It's been 3 years now. The experience was amazing.

What do you prefer to do in your free time?

(Smiles) Is there a free time ...Ok, in free time, I like to read a lot. I like to watch good movies and I like to travel. I have travelled to more than 52 countries. When I was a Student in the UK I saved all my money from the scholarship and spent 45 days in 23 countries with a rucksack on and slept half of the days on the train and the other half in a youth hostel because I could only afford that much.

Who is your role model?

It's a difficult question because there are quite a few people. One of the persons I would name is Dr.APJ Abdul Kalam but I've never met him. The second one I'd say is my history teacher: Avinash Dharmadhikari. He is the director of Chanakya Mandal. I am a trustee of Chanakya Mandal but more than that I'm his Student. The way he gave up his career as an IAS officer and worked for the cause inspires me.

What piece of advice would you like to give to today's parents & youth?

I think it is ironical to give advice to my peers. I think we are getting too much embroiled into what we define and how we define success. Initially my daughter used to say that I don't make much money from consultation but she did not understand the joy I was getting every day because I was at least striving to make impact in lives which has no dollar value. If I were to be driven only by dollar then I wouldn't have come back to India. So one of the things to ponder over for my generation is how do we define success? Is it dollar?,Is it Real?, Is it pound? Or is it mental peace? and the fact that you are making some change? And the second thing is media in general. We should be very careful about how much embroiled we get into social media. We should treat Cricket, Bollywood, and Hollywood only as one part of our life. It's all consuming and it's eating up all in terms of resources and it doesn't deserve that much attention. And to make it worse we don't know many of our real heroes. That makes me sad. So it's not a piece of advice but we shouldn't be influenced by these things.

**वहीचं मागचं पान
- नूतन साळी**

कॉलेज विश्वतल्या मोरपंखी दिवसांची अलगद,
अलवार स्वप्न रंगवताना, पुढच्या आयुष्याचा
विचार करताना, गगनाला गवसणी घालणारी
ध्येयं ठरवताना आणि ती गाठण्याची शिकस्त
करताना 'शाळा' कधी आणि कशी संपून गेली हे
कळलंच नाही. 'रिसेट'चा बटण नसलेल्या या
जगात जगन मग काहीसं अवघड झालं! फोटोना
बघूनही शाळेची आठवण येणार नाही इतकी
आठवण शाळेच्या गणित, भूगोलाच्या व्ह्यांना
पाहून यायला लागली. पुढून संपूर्ण कोर्या
असणाऱ्या व्ह्यांच्यामागे बर्याच आठवणी साठवून
ठेवलेल्या दिसू लागल्या. शाळेच्या व्ह्यांची
मागली पान उलटताना एक-एक यत्तामागे
जाणारा आयुष्य एक वेगळीच गंमत देऊन गेल.
वहीची ती मागची राखीव पानं, त्यातल्यात्यात
आवडीच सगळ्यात मागचंपान. अगदी शेवटचं
पण मनात पाहिलं घर करून बसलेलं!
त्यामागच्या पानाची गंमतच न्यारी!
स्कॉलरशिपच्या वहीचं मागचं पान माझ्या
पहिल्या कवितेचं एकमेव साक्षीदार. इतिहासानं
गारुड घातलेल्या अंतरंगाचे ठसे अभिमानानं

मिरवणारं इतिहासाच्या वहीचं मागचं पान.
शास्त्राच्या वहीचं पान म्हणजे भुकेचाडोब!
नेमका मधल्या सुट्टीच्या आधी असणारा तास
त्यामुळे "ए, कोणती भाजी आणलीये?" "पार्टीच
लक्षात आहे ना?" किवा "आज भाजी एक्सचेंज
करूया?" असल्या नानाविध प्रश्नांनी गजबजलेलं
ते पान.

बिंगो, फुलीगोळा, नाव-गाव-फळ-फुल खेळून
बरबटवलेलं गणिताच्या वहीचं मागचं पान!
अशी कित्येकव्ह्यांची मागची पानं शाळेतल्या
आठवणींना समृद्ध करतात. माझ्या शाळेतल्या
सुंदर, स्पर्धात्मक दिवसांची आठवण करून देतात!
शाळेतल्या व्ह्यांची मागची पानं उलटताना,
जुन्या आठवणींचे कप्पे अपोआप उघडतात! त्या
आठवणीं मागेधावताना मग,
बरेच नवे धागेदोरे सापडतात!!!!

शाळेतून 'माजी' झालेल्या माझ्या मैत्रिणीनो,
तुमच्या शाळेच्या व्ह्यांची मागची पानं जरूर
उलगडून पहा. बघा, काही नवीन धागेदोरे
सापडतात का? शाळेचे ते सुंदर, निरागस दिवस
पुन्हा एकदा अनुभवा!!!

DID YOU KNOW...??

Earth is the only planet not named after a god

The other seven planets in our solar system are all named after Roman gods or goddesses. Although only Mercury, Venus, Mars, Jupiter and Saturn were named during ancient times, because they were visible to the naked eye, the Roman method of naming planets was retained after the discovery of Uranus and Neptune.

NATIONAL SERVICE SCHEME

- AISHWARYA NIKALJE

Activities of NSS in year 2015-16 are as follow:

1) Kamshet Ashram Shala visit:

NSS students visit Kamshet ashram shala on 2nd October.

2) Eye checking camp:

CCOEW NSS have organized Eye check-up Camp in CCOEW's campus.

3) Special NSS camp:

Our college has adopted village Kalyan which is 35Kms away from Pune .We conducted the special residential camp of 7 days at Kalyan.25 students attended the camp and various activities like educational programs for school students, eye checking camp, stitching workshop for women, trekking to Sinhagad fort.

4) Road safety awareness:

5) Swachata Abhiyan

6) Blood donation camp:

Blood donation held in our college campus. Teachers, students donated blood to Jankalyan blood bank.

NSS volunteers:

TE

- 1) Akshata Mane
- 2) Aishwarya Nikalje
- 3) Sarita Garje
- 4) Madhura Limaye
- 5) Nikita Babar
- 6) Poonam Chahal
- 7) Vaishnavi Radkar

SE

- 1) Chaitali Gawade
- 2) Pooja Sonawane
- 3) Ashwini Rampure
- 4) Akshata Patki
- 5) Harshada Bagmar
- 6) Kate Mayuri
- 7) ApoorvaTeli
- 8) Snehal Malshikhare
- 9) Aishwarya Patwardhan
- 10) Prajka Gavali
- 11) Akshata Poojari
- 12) Pallavi Dhake
- 13) Apurva Gawande
- 14) Meghana Kanade

GOOD THOUGHTS

- Dream, Dream, Dream.. Dreams transform into thoughts and thoughts result in action.
- Difficulties in your life do not come to destroy you, but to help you realize your hidden potential and power, let difficulties know that you too are difficult.
- All birds find shelter during a rain. But Eagles avoid rain by flying above the clouds.
- Problems are common, but attitude make the difference.
- Suffering is the essence of success!
- Confidence and Hard work is the best medicine to kill the disease called failure. It will make you successful person.

- APJ Abdul Kalam

**INTERVIEW OF SHWETA GUSAIN
(CAPTAIN, BAJA) & SAANCHI
KHANDEKAR (VICE-CAPTAIN,
BAJA)**



**- AMRUTABHAGWAT, HEMLATA
JOSHI**

Describe your journey of BAJA 2016.

The actual journey started in 2015. We were a group of 24 people. So, that is the year Baja came into my life. That was the year when we got to know the parts of a car, a normal car. We were not aware of anything. It was the first time when we got into that field and we saw new things. The previous BAJA car was made of ready-made parts which were taken from various vehicles and simply assembled, which ultimately increased the weight of the car. So this year we came up with the idea to reduce the weight. That was the major aim. We were able to achieve this and the weight reduction is 97.5 kg and that was huge number. We were happy with the results.

How did you achieve that?

In 2015 most of the parts were from commercial cars. We just bought those and assembled them. This time we thought of applying engineering i.e. some actual engineering principles. We tried to design each and every part changed the material, used some FEA tools and with this we were able to transform the parts of the car from commercial parts to custom made. This is how we achieved it.

What were the major difficulties that you faced during manufacturing of the car?

The major difficulty was to find the right manufacturing process for the new design

we had come up with. Because initially the approach was applying the engineering principles that we had studied so did not really focus on the manufacturing process. So we spent about a month for finding the manufacturers who could put our designs into reality. Another major issue was that most of the manufacturers which we came across produced product in bulk and we required only a single product, so this led to cost issues. We came across one more issue which was related to tolerances; actually we were not aware of its importance. We simply gave our designs to the manufacturers and did not check for the tolerances while taking the finished products from them and this led to a major issue during the gear box assembly. During the assembling there was a misalignment between the shaft and the bearing and due to this the gear did not mesh properly.

Being captain (Shweta Gusain) and vice-captain (Saanchi Khandekar) what were the major challenges you came across?

The most difficult task was to take the team together. Some people do not like to do a particular kind of task, so being a captain you have to convince them that each and every task is important, and since they are working in a team they should understand their responsibilities and make them realise even small contributions from them can help the team achieve the target. Also the team has people from different years and mind-set, so getting all those ideologies together and getting the best design from the team is yet another big challenge.

Can you share your experience, being the driver (Saanchi Khandekar) of the BAJA team?

I was also the driver for the year 2015. So the major difference between the two years is that, in year 2015 it was an OEM part car so we were very sure that there won't be a breakdown in any particular part so the approach towards driving the car in 2015 was very different from what it was in 2016 because this year all the parts were made by us, so we exactly knew where there was a

flaw or how a particular part could fail. The mind-set was very different. I was more careful this year.

What was your experience in the competition, being an all-girls team?

Actually there were two other all women team this year in the competition, so no special recognition as such, because in BAJA, I believe they do not have any distinguishing factor like this is an all-girls team or an all-boys team, it is just on the basis of merit, so no special appreciation as such on being an all women team, but definitely whatever hard work is put in is always appreciated there". "There you are not a girls' team or a boys' team, you are just a team and you have to compete like all other teams".

How has BAJA impacted on your personality?

BAJA has changed my attitude towards life,

I mean, earlier when we use to face a difficulty we used to give up, now we have realised that you can tackle every problem in life, it doesn't matter how many times you fail, just keep on trying and you will definitely get the results.

What were the achievements and failures for the BAJA team this year?

The major achievement was weight reduction, in the design evaluation event the judges appreciated that there were many changes in this year's car from the previous year. We had many improvements in our design. All the parts, except for the tyres, steering wheel and the engine, were designed by our team. So that was a big achievement for us this year. Coming to the failures, during the competition every team has to go through certain obstacles, so

during one of the obstacles called the booby-trap, where there are hills of different heights, so what happened was, when the car was going over those hills the drive shaft came out of the gear box, so there was no way the power could be transmitted to the wheels and the vehicle stopped but the problem here was that being a hilly area we did not really understand what all kinds of forces acted on that drive shaft resulting in the failure. So the approach now would be, getting the car back into working condition, test it on similar terrain and analyse how a particular component fails and that is what I think would help us improve our mistakes of the previous year. For this particular failure, we went back to the pit, we repaired it, and we got back on track. Another failure was, again on the booby-trap ,the air wheels got locked and that was one failure that was going to take time to be repaired, and being a four hour race we have time limitations, so we couldn't really get back on track after the second failure. So these were the two major failures.

What message would you like to give the students?

Yes, I would like to convey this message, that every automobile enthusiast should be a part of BAJA and if you are a part of BAJA team stay there for at least two years. For one year people come to take experience but you have to apply that ,all their experience goes in vain if they are not applying it next year or after that. Also for this year's team, if majority of the people stay back in the team we will be having a very good team.

RESULT ANALYSIS

MAY-JUNE 2014-15

Second Year (TOP 10)

Sr. No.	Last Name	Name	Total	Percentage
1	RADKAR	VAISHNAVI	1208	80.5%
2	PATIL	JUILI	1154	76.9%
3	INAMDAR	SWARUPA	1142	76.13%
4	WADHAVKAR	ASHWINI	1131	75.4%
5	LIMAYE	MADHURA	1121	74.7%
6	THAKUR	POOJA	1121	74.7%
7	KHANDEKAR	SAANCHI	1102	73.5%
8	DESHPANDE	JUILEE	1055	70.3%
9	TERGAONKAR	ISHANI	1040	69.3%
10	VIDHISHA	ASHAR	1040	69.3%

Third Year (TOP 10)

Sr. No.	Last Name	Name	Total	Percentage
1	KAIMAL	AJITHAKUMARI	1207	80.5%
2	BRAHME	PRAJAKTA	1181	78.7%
3	MORE	PUJA	1175	78.3%
4	NEMANE	VARSHA	1138	75.9%
5	PETKAR	KIRTI	1128	75.2%
6	DONGARE	TEJASHRI	1108	73.9%
7	BAPAT	MANALI	1107	73.8%
8	SWETA	GUSAIN	1105	73.7%
9	WAGH	SUCHETA	1097	73.1%
10	MITALI	ASHISH	1092	72.8%

Fourth Year (TOP 10)

Sr. No.	Last Name	Name	Total	Percentage
1	KATRELA	SNEHA	1170	78.0%
2	PATIL	MAITRAYEE	1151	76.7%
3	GUPTE	SURABHI	1140	76.0%
4	JOSHI	PRAJAKTA	1126	75.1%
5	NIMBALKAR	KAJAL	1102	73.5%
6	KIZHAKKEL	SHRUTI	1102	73.5%
7	ZINGADE	TEJASWINI	1092	72.8%
8	DEEPIKA	NAMBOOTHIRI	1090	72.7%
9	DUHAN	NEHA	1086	72.4%
10	LAGU	KOMAL	1084	72.3%

SUBJECT TOPPER

Semester I (Nov -Dec 2014-2015)

Second Year

Sr.No	Student Name	Subject Name	Subject Marks	Percentage
1	Radkar Vaishnavi	Thermodynamics	83	81.50
2.	Inamdar Swarupa	Engineering Mathematics-III	94	80.50
3.	Patil Juili	Manufacturing Process-I	79	78.80
4.	Patil Juili	Material Science	72	78.80
5.	Thakur Pooja	Fluid Machines	83	75.50

Third Year

Sr.No	Student Name	Subject Name	Subject Marks	Percentage
1	Kaimal Ajithakumari	Heat Transfer	92	81.70
2	Kaimal Ajithakumari	Hydraulics & Pneumatics	84	81.70
3	Brahme Prajakta	Design of Machine Elements-I	84	80.00
4.	Radhika Mohanan	Theory of Machine-II	82	76.00
5..	Nishita Deshmukh	Metrology and Quality Control	73	73.20

Fourth Year

Sr.No	Student Name	Subject Name	Subject Marks	Percentage
1	Katrele Sneha	CAD/CAM	71	78.0
2	Patil Maitrayee	Dynamics of Machinery	73	76.30
3	Katrele Sneha	Industrial Fluid Power	75	78.00
4	Nimbalkar Kajal	Energy Audit & Mgt	72	71.90
5	Gupte Surabhi	Quantitative and Decision making Techniques	89	75.10
6.	Shinde Pratiksha	Automobile Engineering	79	66.30

Semester II May –June 2014-15

Second Year

Sr.No	Student Name	Subject Name	Subject Marks	Percentage
1	Ashwini Wadhavkar	Applied Thermodynamics	85	75.40
2	Ashwini Wadhavkar	Theory of Machines-I	82	75.40
3	Radkar Vaishnavi	Strength of Material	82	80.50
4	Inamdar Swarupa	Strength of Material	82	76.13
5	Patwardhan Aishwarya	Electronic & Electrical Engineering	78	66.10
6.	Patil Juili	Engineering Metallurgy	77	76.90

Third Year

Sr.No	Student Name	Subject Name	Subject Marks	Percentage
1	Nishita Deshmukh	Numerical Method & Optimization	94	72.20
2	Sweta Gusain	Manufacturing Process-II	85	73.70
3	Nemane Varsha	Design of Machine Elements-II	84	75.90
4	Wandhekar Amruta	Design of Machine Elements-II	84	68.80
5	Bapat Manali	Turbo Machinery	80	73.80
6.	More Puja	Mechatronics	76	78.30

Final Year

Sr.No	Student Name	Subject Name	Subject Marks	Percentage
1	Zingade Tejaswini	Mechanical System Design	84	72.80
2	Katrele Sneha	Power Plant Engineering	77	78.70
3	Nimbalkar Kajal	Industrial Heat Transfer Equipments	76	73.50
4	Gupte Surabhi	Management Information System	74	76.0
5	Zingade Tejaswini	Finite Element System	74	72.80
6.	Sahane Payal	Finite Element System	74	69.70
7.	Rajput Samiksha	Finite Element System	74	68.90
8.	Roshani Patel	Finite Element System	74	65.90
9.	Wankhede Karishma	Robotics	68	64.50

PLACEMENTS: 2015-2016

Sr. No.	Name of the Company	Students Placed	Salary Offered
1	Siemens	Tejal Prabhu	9 lac
2	Target	Sharaddha Babar	7.2 lac
3	M&M	Jyoti Sonawane	5.75 lac
		Mugdha Kokeel	
		Sweta Gusain	
4	CIL	Ajithakumari Kaimal	4.8 lac
		Prajakta Brahme	
		Kirti Petkar	
		Tejashri Dongare	
		Kshitija Desai	
		Priyanka Deo	
		Manali Bapat	
		Nilaya Abhyankar	
		Tejal Prabhu	
		Puja More	
		Meghna Sarkar	
		Nilam Khot	
		Shraddha Babar	
		Pooja Khujat	
		Rashmi Gaikwad	
		Smita Shinde	
Manisha Gaikwad			
Sanjana Kelkar			
Manisha Khude			
Sneha Patil			
5	Ford Motors	Nupur Kulkarni	4.75 lac
6	Schneider Electric	Pratiksha Talekar	4.75 lac
		Tirtha Tambe	
7	Eaton	Varsha M Nemane	4.5 lac
		Anjali Pandey	
		Komal B Korde	
		Ayushi Karwat	
		Radhika Mohanan	
8	Mu Sigma	Shiwani Pandit	4.5 lac
9	Anand Group	Shraddha Kale	4.5 lac
		Shraddha Aute	
10	Scheaffler India	Priyanka Deo	4.25 lac
		Puja More	
11	Bajaj Auto	Kshitija Desai	3.5 lac

12	Persistent	Shrutika Bhandari	3.5 lac
13	Alfa Laval	Sucheta Wagh	3.2 lac
		Mitali Vaidya	
		Shrutika Bhandari	
		Kranti Garatkar	
14	Accenture	Nupur Kothari	3.15 lac
		Shreya Kulkarni	
		Tanvi Wani	
15	Infosys	Shweta Hegade	3.15 lac
16	GE	Anjali Pandey	7.5
		Nishita Deshmukh	
		Radhika Mohanan	
		Kirti Petkar	
17	Faurecia	Pranali Sonavale	3 lac

WORKSHOPS CONDUCTED AT DEPARTMENT

Academic Year 2015-2016

	2015-16	Date
1	Advance in Analysis Measurement and Control of Noise, Vibration & Harshness	10-12th Jun. 2015
2	Syllabus Implementation DOM Workshop (2012 Course)	10th Jul. 2015
3	Guest Lecture of Dr. K.M Rajan, Director, ARDE,(DRDO) Pune	15th Jan. 2016
4	Ansys Workshop (Two Days)	15th& 16th Feb 2016

GUEST LECTURE SERIES

Academic Year 2015-2016

Semester I

Sr.No.	Class	Name of Subject	Internal Faculty	Expert Faculty	Organization
1	S E	Thermodynamics	Prof. R. Agavekar	Dr. S.A. Dixit	IITM Pune
2		Material Science	Prof. S. Divekar	Ms. Sangita Kapote	NDT Expert
3		Manufacturing Processes	Prof. H. M. Shinde	Ms. Divya Adibhattla	CIL
4		Fluid Mechanics	Prof. A. A. Rajurkar	Ms.Snehal Ukey	CIL
5		C A M D	Prof. H. M. Shinde	Mr.Uday Chhatre & Mr. Kiran Lalsangi	11DOT CAD TECH
6	SE,TE	Applied Thermodynamics	Prof. R. Agavekar	Mr. Umesh Sawant	Cummins Emission Solutions
7	T E	Machine Design I	Prof. N. R. Patil	Mr. Tushar Kanikdale	CRTI Pune
8		Heat Transfer	Prof. P. S. Chaware	Mr. Ashish Kulkarni	Tridiagonal Solution
9		Metrology and Quality Control	Dr. Bewoor	Mr. Balaji Reddie	Consultant Quality Engineering
10		Metrology and Quality Control	Dr.Bewoor	Mr. Mukesh Oswal	Cummins India Ltd.
11		Hydraulics & Pneumatics	Dr. A. A. Bhosale	Mr. Nitin Kardekar	Hydrocad
12		Theory of Machines II	Dr. G. S. Chandekar	Mr. Tushar Kanikdale	CRTI Pune
13	B E	Dynamics of Machinery	Dr. R. B. Ingle	Ms. Neha Sharma	Cummins INDIA Ltd
14		Dynamics of Machinery	Dr. R. B. Ingle	Mr. Shashank Badgujar	ARAI Pune
15		Refrigeration and Air Conditioning	Prof. R. Agavekar	Mr. Bipin Revankar	Ecofresh Cold Storage
16		CAD/CAM and Automation	Prof. Y. S. Munde	Mr. Chetan Honmore	CADCAMGURU
17		Energy Audit & Management	Prof. S. A. Kedar	Mr. Sanjay Kulkarni	Ecosun Energy Co.
18		Energy Audit & Management	Prof. S. A. Kedar	Mr. A.Y. Mehandale	Enrich Consultant
19		Reliability Engineering	Prof. Nikam	Mr. Sarang Thakare	Cummins India LTD
20		Operational Research	Prof. A. A. Rajurkar	Mr. Girish Pathak	Infostar Business Solution

Semester II

Sr.No.	Class	Name of Subject	Internal Faculty	Expert Faculty	Organization
1	F E	Basic Mechanical Engineering	Prof. N. R. Kolhalkar	Mr. Amod Khardekar	CIL
2				Mr. Nitin Mule	
3				Mr. Bharath Seetharaman	
4				Mr. Hemanth Gopalkrishan	
5				Ms. Divya Ratra	
6				Mr. J. M. Ramamoothy	
7	SE	Applied Thermodynamics	Prof. T. T. Wani	Mr. M. Mahadevan	CIL
8		Mechatronics	Dr. A. K. Bewoor	Prof. Vikas Hajare	CCOEW
9				Prof. Mrunal Moharir	
10	TE	Computer Oriented Numerical Methods	Prof. R. A. Agavekar	Mr. Nachiket Kasarekar	ESTECO, INC
11				Ms. Dhanashree Wazalwar	
11		Manufacturing Processes	Prof. H. M. Shinde	Mr. Venkatesh Purohit	Tata Motors Limited
13	B E	Power Plant Engineering	Prof. P. S. Chaware	Mr. Shrirang Chandekar	Lean Way Energy Systems Pvt. Ltd.
14				Prof. M. A. Choudhari	Retired Professor from GPP
15				Mr. Arvind Paranjape	Sr. Consultant
16		Industrial Engineering	Dr. A. K. Bewoor	Mr. Yogesh Antand	CIL
				Mr. Mukesh Oswal	GM Industrial Engineering, CIL
17		Design of Pump Blower and Compressor	Prof. S. A. Kedar	Mr. Milind Aalvekar	Chemlin Pumps & Valves Pvt. Ltd.

FACULTY ACADEMIC YEAR OF PUBLICATIONS: 2015-16

Sr. No.	Name of the Author	Journals/International Conference	Paper Title	Volume, Issue No., (Month/Yr.) & Page no.	Type
1	Dr. A. K. Bewoor	International Conference on Trends in Industrial and Mechanical Engineering (ICTIME 2016),	Methodology for identification of critical equipments in thermal power plant using criticality analysis	Accepted February 4-6, 2016	IC
2	Dr. G. S. Chandekar	MATLAB EXPO India 2016 Conference	Modal Analysis	Accepted	IC
3	Prof. P.S. Chaware	International Journal of Heat and Mass Transfer	Effect Of Reynolds Number And Twist Ratio On Fluid Flow And Heat Transfer For Flow Through Pipe With Twisted Tape Inserts	Submitted	IJ

LIST OF PANEL MEMBERS FROM THE DEPARTMENT

BE -

- 1) Nilaya Abhyankar - University Representative
- 2) Samruddhi Jadhav - Assistant Cultural Secretary
- 3) Kranti Garatkar - Branch Representative

TE -

- 1) Ashwini Wadhavkar - Assistant Technical Secretary
- 2) Ankita Jha - Training and Placement Representative
- 3) Unnati Korgaonkar - Assistant Sports Secretary

SE -

- 1) Durga Tilak - English Editor

SAE BAJA: NATIONAL LEVEL CAR DESIGN AND BUILD COMPETITION

Held on 17-21st Feb at Prithampura, Indore

Sr No.	Name of the Students	Year	Department	Responsibility
1	Sweta Gusain	BE	Roll Cage	Captain+ Roll Cage Head
2	Saanchi Khandekar	TE	Steering	Vice-Captain + Driver + Head of Steering Team
3	Radheshree Ingle	SE	Suspension	Treasurer
4	Roocha Divate	TE		Head of Suspension Team
5	Priti Patil	SE		
6	Akshata Mahajan	SE		
7	Aishwarya Jawale	TE	Brakes	Head of Brakes
8	AishwaryaAkhade	SE		
9	Pooja Thakur	TE		Sales representative
10	Vaishanavi Radkar	TE		
11	Akshata Mane	TE	Transmission	Quality Manager
12	Shweta Hegade	BE		Head of Transmission
13	Indrani Gadgil	SE		
14	Rajli Adhav	SE		
15	Bhagyashree Sutar	BE	Manufacturing	Primary Welder
16	Aishwarya Patil	TE		Secondary Welder
17	Shweta Danwade	TE Instrumentation	Electricals	Sponsorship Head
18	Pallavi Yadav	SE	Steering	
19	Pratima Deshmukh	SE		
20	Nikita Babar	TE	CAE	

Events Held In The Department



BAJA 2016



Noise, Vibration & Harshness Workshop

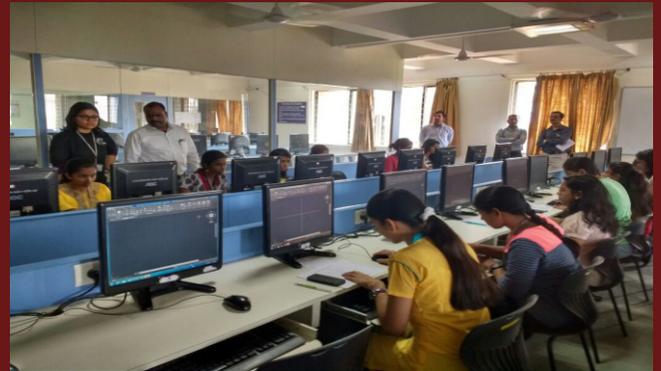


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IC CAR WARS

CAD RUSH!!



ASME CHAPTER



Poster Presentation



Ansys Workshop

EMINENT SPEAKERS



Silver Jubilee Celebration
Honourable Chief Guest - Smriti Irani



Session by Mr. Rajan, Director, ARDE



Interactive Session with Mary Chandler,
President, Cummins Foundation

Visits to the Department



UGC Committee



Dr. Jay Gore, Director of the Energy Centre in Discovery Park
Vincent P. Reilly Professor in Combustion Engg,
Purdue University, USA

Group Dance



SE

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Department
Show



Traditional Day



Fashion Show