

ORCHID

# AUSA

2020

MAKE IN INDIA

आत्मनिर्भर  
भारत

सोलापूर विद्यापीठ, सोलापूर आयोजित  
सृजनरंग २०१९  
नियतकालिक स्पर्धेत  
द्वितीय पारितोषिक





Pradnya Niketan Education Society, Pune.

# NAGESH KARAJAGI *ORCHID* COLLEGE OF ENGG. & TECH., SOLAPUR.

S.E. to M.E. Affiliated to Solapur University, Solapur  
Approved by A.I.C.T.E, New Delhi & Govt. of Maharashtra



## Vision

**Locally Rooted, Globally Competent Education.**

## Mission

To strive for excellence in our teaching-learning process,  
encouraging creativity and critical thinking.  
Strengthening Industry-Institute interaction.  
Providing holistic education for the student's personality development.  
To imbibe universal values of respect, commitment and team spirit.  
Providing Employable Education.  
Promoting research and consultancy.

## Core Values Of The Institute

The management, faculty and staff of the institute endeavor to:  
Provide education of quality that meets needs of local, national and global industries.  
Provide students with knowledge that prepare them to be innovative  
Foster an environment for faculty, staff, and students that stimulates excellence.  
Work together for the common goal of the institute  
Constantly strive for improvement through teamwork, responsibility,  
accountability, integrity, and trust.  
Transform the society through education.  
Serve for welfare of the people.





## विद्यापीठ गीत

बिंदू मनाचा सिंधू होईतो, करु अथक साधना  
ज्ञान रवीने तिमीर हराया विकसित हो रे मना!!

अभिमंत्रित हे ज्ञान निकेतन  
इथे कराया हृदय समर्पण  
भीमज्योतीची, सावित्रीची  
विश्वात्मक त्या मनकरुणेची  
घेऊ उरी चेतना!  
विकसित हो रे मना!

शिवतेजाने उजके अंबर  
तरंग त्याचे इथे निरंतर  
शौर्य धैर्य अन् पराक्रमाची  
सहगिरीतील त्या गाथेची  
रुजवू सद्भावना !  
विकसित हो रे मना !

सरस्वतीच्या कृपाप्रसादे,  
आयुष्याचे फूल उमलू दे!  
कर्तृत्वाचा दीप उजळू दे!  
सत्यशिवाचे बीज बहरु दे !  
देऊ रूप जीवना !  
विकसित हो रे मना !

गीत - प्रविण दवणे  
संगीत - श्रीधर फडके



# PRINCIPAL'S VIEW

“ *The most difficult situations teach us the Greatest Lessons of LIFE.* ”

**Dear Readers,**

In the beginning I really applaud the efforts of editorial team for bringing out this e-magazine, Orchid Aura 2020 during the pandemic crisis. It accentuate our excellence to creative pursuit. Orchid has set up tradition of bringing out this students voice. At times it felt that this tradition may stop due to coronavirus and lockdown. But I really congratulate the editorial team to come up with the novel idea of e-magazine. I think this is the first e-magazine published by an Engineering colleges ever. I am overwhelmed to see the students involvement and enormous efforts working from Home for bringing out Orchid Aura 2020.

India and the world are facing an unprecedented time, and we greatly appreciate your understanding and flexibility as the situation continually changes. The scars of covid-19 are still afresh and we will have to continue our fight by protecting ourselves and our family. Yet, as the learning is a continuous process, one should not lose the focus on our career development. I always felt that the most difficult situations teach us the greatest lessons of life.

Yes, the last few months were challenging for everyone of us. Though, we at Orchid continued our academics through new model of Orchid Online Engineering Education System. Despite pandemic and lockdown, we completed syllabus and conducted various initiatives like online webinars, preplacement workshops, online Internships. We made sure that the pandemic should not be hurdle in the students' development as an Engineering professionals.



I feel to battle with covid-19, the role of Engineers is extremely crucial as we are the most innovative products of the society. Right from building new hospitals to help scientists in inventing a vaccine for Covid19, Engineers are at the focal point of society. Considering this major contribution, the theme of this year's magazine is the role of Engineers in fighting against Coronavirus. We have a responsibility to innovate new products by applying our engineering skills in this pandemic.

I appreciate the efforts of Editors of Orchid Aura 2020, Prof. Shivaji Chavan and Prof. B. R. Birajdar, all the faculty coordinators who have ensured that the quality articles were published through the magazine. I would specially congratulate the Secretary of Orchid Aura 2020, Vinit Palganti and students coordinators for the consistent efforts and completing this mammoth task.

Let's hope a better tomorrow, health and prosperity.

**Happy reading!!!**

**Dr. J.B. Dafedar**  
Principal

# Magazine **EDITOR'S** Message...



“ *The Hope.....  
How dull it is to pause,  
to make an end,  
To rust unburnish'd,  
not to shine in use!* ”

These lines by Alfred Tennyson from the poem Ulysses are quite apt in these difficult times. In the midst of the fear and terror of Coronavirus, we the Orchidians have come up with the hope. The hope which has driven the human race in worst of times. The hope which is a sign of life. The hope which shows path while we struggle to rise. Yes, hope is the only answer which has brought us here as the most creative and perfect creature of the earth. During such obscure times, it's really immaculate that our budding creative writers, passionate poets and advanced bloggers have justified the phrase “perfect creature of the earth”.

Charles Dickens starts his novel The tale of Two Cities with the sentence- “This is the best of times. This is the worst of times.” The present situation is no different than the lines written for French Revolution. It completely depends on how we are looking at it. Being the youngest and most dynamic country in the world, we have huge responsibility to drive this beautiful nation to the next level. Tough times will make us tougher and bring the best out of us. Through, Orchid Aura 2020, we, the Orchidians are bringing here some gems of articles which are representation of life through our students' lens.

Huge round of applause for Vinit (The magazine Secretary) and team who have taken immaculate efforts to bring this great work of art. It has endorsed the tradition of Orchidians creativity which has no limits and bounds. It has endorsed that no lockdown, quarantine or any negativity can stop creativity and innovation. Thank you students editorial team for continuing the great tradition of Orchidians creative instinct and bringing this E-magazine for the readers.

The driving force behind the team Orchid Aura 2020, Hon. Prinicpal Dr. J. B. Dafedar sir has been always inspirational for taking this uphill task. I am grateful to the management, all Faculty Coordinators, Role holders, faculty and staff members for helping us in every stage.

Every adversity comes with an opportunity. The pandemic has given us that opportunity to rethink, jot down and introspect about what we have and what we really want. I hope this students angle of looking towards life will bring a hope and smile in your life.

***Happy Reading. Stay Safe.***

*S.U. Chavan*

**Prof. S.U. Chavan**  
Magazine Editor

# Magazine **CO-EDITOR'S** Message...



“*Happiness is  
only real once shared*”

## ***Dear Readers,***

New beginnings bring in joy and excitement. It really gives me a huge courage and pleasure to present here with our college annual e- magazine ORCHID AURA-2020. We are in the age of digitalization. Our country is seeing digital transformation in all facets of our lives. So this is our first e-magazine introduced due to COVID-19. I understand that the publication has gained in unprecedented popularity among young readers. This is heartening to witness, and wish all the success with many more to come.

The opportunity to set oneself free from a daily routine is an enormous driving force. Each voice is to be heard. The college magazine gives each one this invaluable opportunity. Studies are an important facet of student's life. But equally important is to give full vent to feelings and expressions. This leads to a thinking society, honouring varied views and inclusive thought process.

Students have worked hard to bring up exiting flashbacks of the college events and achievements during the year. We have wide range of poetry, inspirational articles, students achievements, events, and much more contributed by an enthusiastic team of students, faculties.

Finally I extend my warm greeting and felicitations to the students, faculty members, magazine committee members, Principal sir, Management of NKOCET and everyone who were involved in contribution for such a beautiful creation.

I extremely wish all the readers, an enriched experience while going through our e-magazine.  
Warm regards.

**Prof. B.R. Birajdar**  
Magazine Co-Editor

# Magazine **SECRETARY'S** CONTEMPLATION

“ *Art of Writing is the creative process to know your self better* ”

With gratification we put forth the next and synergized piece of creation 'AURA-2020' our annual college magazine. An assemblage of the creative expression by our student friends as literary contributions. Creative expression offers us a chance to dig deeper into ourselves to reflect through writing, to discover new ways of seeing and solving, to heal, and to alleviate stress among other life changing gifts. The best thing is you don't have to be an artist to be able to reap its benefits.

Creativity breathes within each one of us, and when we ourselves to create something creative without worrying about the outcome, we open new door to composure, enrichment, empowerment and joy. We believe that the magazine is the student driven activity which is for the students and by the students. It's towering platform where the students can show their hidden talent present in them such as writing articles, poems, drawing, sketching, photography and many more other things creatively.

The Orchid AURA-2020 was not a task of a single person but it's a teamwork. I'm Glad that my team, especially Chief editor Prof. S. U. Chavan and student coordinators worked hand-in-hand to letting it all done. They

understood me all the way without being impatient. Right from the campaigning to the printing of the magazine I learnt how to get things done from variety of people.

The student coordinators of all the sections subdue the work assigned to them within time. I found this very amusing that every Orchidian and the team member took every initiative with full of energy. I would like to thank all of them and all the Engineer cum Artists who put their ideas and thoughts in creating the Orchid Souvenir AURA-2020.

It is not our aim to tell you anything of what you will discover in this magazine but I do not doubt when you have finished reading this, you'll want to go back to enjoy some articles again for the beauty of what describe or because of the intensity of the feelings the convey. My experience with the creative facilitation through magazine for about 3 years has given me a taste of the enormous power and possibilities of creative expression. And I finally feel ready as Secretary to share this with you all to crack a smile on your beautiful faces.

***Happy Reading!***

**Vinit Palganti**  
Magazine Secretary



A portrait of a young man with dark hair and a beard, wearing a white shirt, smiling. The background is a textured yellow.

## Magazine CO-SECRETARY'S MUSING

“ *Journey is not about finding aims, it means exploring ourself.* ”

It all starts with a small feeling that everyone feels in their life is to be the person who work for something different than others, work for their interests. As I started my journey from being Orchidian in 2018 to the Co secretary of AURA 2K20 is one of the example of exploring myself for being Little bit different than others and proving myself to be the best. Being a part of NKOCET since last two years, I've made good relations and unforgettable memories of it. When my name was announced as the Co-secretary of the AURA 2K20, I felt so Proud that I'm stepping towards my favourite work area. Being the part of Annual magazine of NKOCET And this responsibility matters me a lot. I'm so thankful to our respected S. U. CHAVAN sir for considering me capable and giving me this opportunity for work with and supporting me.

When I started working for magazine as this responsibility given to me, I thought it was little bit hard to Create and maintain the atmosphere for students that they feel free to share their thoughts. But I realized that it's not so difficult. It was great experience of doing job with combination of fun and seriousness at the same time. There is a huge Source of thoughts and knowledge out there and we all tried our best to catch them and tried to tie them in our Magazine. "A room without books

is like a body without a soul" And we tried our best to make this book very innovative with so many interesting moments of us.

It was a great opportunity for me to work for Art section coordinator in AURA 2K20. Working with so many people, Admiring their arts and Managing them attractively for you all. It was so wonderful job for me. It was also a great experience f working with my team that gave me a confidence for becoming the Co-secretary of AURA. It gave me enormous pleasure to ensure that this magazine has successfully accomplished it's objective. AURA is before you due to the collaborative efforts of the Editorial board, the coordinators and the college management with everyone doing their role sincerely.

Many thanks to our secretary Mr. Vinit Palganti and all my dear batchmates whose help always pushed me to work so great. I hope you all will like and enjoy our magazine and will have fun to reading it. **Sayonara!**

A handwritten signature in blue ink that reads "Pratik Bhadkumbe".

*Pratik Bhadkumbe*

**Pratik Bhadkumbe**  
Magazine Co-Secretary

## about the **COVER PAGE**

At a time when the world is suffering from a deadly pandemic, India plans to convert this crisis into an opportunity and strengthen its fight by becoming **Aatmanirbhar** or **self-reliant**.

The term was coined by the Prime Minister of India, Mr Narendra Modi during his address to the nation on May 12, 2020. He called this campaign as **Aatma Nirbhar Bharat Abhiyaan** (Self-Reliant India Movement). There are five pillars of **Aatmanirbhar Bharat** – Economy, Infrastructure, System, Demography and Demand. The impetus is given upon the fact that it is time to become vocal for our local products and make them global. We, being associated with Engineering domain, we see a huge opportunity to embark out journey towards making India self-reliant. Engineers and Engineering students have a lion's share in this initiative.

It is said that every adversity is an opportunity. India, being the youngest country of the world has a huge potential in various sectors of Engineering right from Infrastructure to IT domain. It has proven itself in IT domain already by being a Global leader in the form of TCS, Infosys, Wipro and many more. Similarly, with the initiative of **AATMNI RBHAR BHARAT**, India can become world leader in the sector of Manufacturing and other industries.

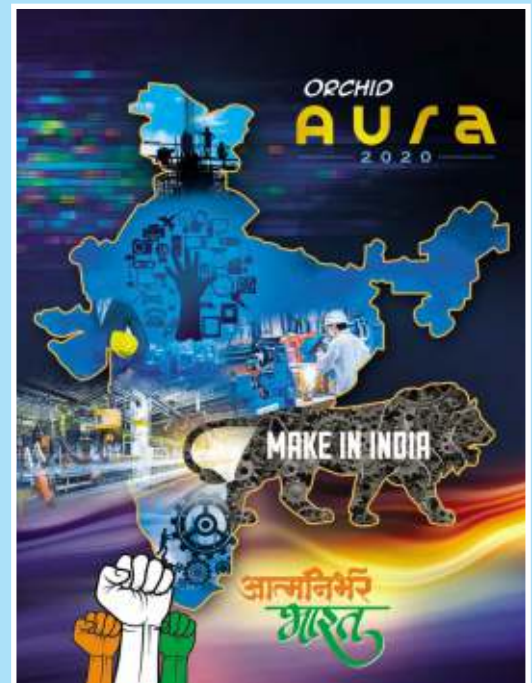
There are two components of self-reliant India. First is developing, promoting and selling world-class Brand India. The second one is to attract multi-national foreign companies desirous of re-locating from China post Covid by providing them business facilities and environment at least equal to if not better than China.

For making Brand India world class as well as affordable, we need to develop the talent and infrastructure for designing and producing products which compete with market leaders like I-phone, BMW, Samsung, Nike, Gucci, Honda, Google, Android etc without compromising on quality yet cheaper and affordable. Quality, reliability, visibility, afford ability and ease of access are a few essentials for brand acceptability. As PM had said self-reliance does not mean using only **swadeshi** products but implies producing world-class quality products which would sell not only domestically but globally. Self-reliance does not mean that you depend on the free cash doles given by the government to sustain you but it means that you become a contributor to nation's economy by starting own business with incentives and loans given by the government and stand gradually on your own feet. Once you are on your own feet, loan can be re-paid. Be a contributor rather than a dependant. In nutshell, there is a need to shed all our past inhibitions and forge ahead with a new mind-set. A positive mind-set of **"We Can We Will."**

Make in India, Make for India, Make for World, the quintessential requirement of inclusivity is the key to provide global reach to the Vocal for Local programme-the spirit behind **Aatm Nirbhar Bharat**.

***Those who dare to seize opportunity will come out winners!!!***

**- Vinit Palganti**





## about the **BACK PAGE & LOGO**

The Covid-19 outbreak has brought our lives to a standstill and has confronted the entire world with a crisis like ever before, redefining the way we exist. With numerous businesses across the world having had to pull their shutters, and most countries being under lockdown, the economy has taken a severe hit, forcing everyone to fight the pandemic in the best way they can.

Amidst extended nationwide lockdown, social distancing has emerged as the new norm and most of us enjoy the privilege of staying at home and staying safe. However, in the wake of this unprecedented calamity, the medical community including doctors, nurses, the medical staff and policemen are the true warriors who are fighting this disease on the front lines and putting their own lives at risk to keep us safe.

Since the beginning of the outbreak, healthcare professionals and police have truly been selfless warriors, giving everything to uphold their job responsibilities, even at the cost of cutting themselves off from their families and loved ones. The list of Corona warriors is huge as everyone contributed to overcome this crisis.

First came the doctors, nurses, ward boys, pathologists, pharmacists and their ilk. As stricter norms came to be implemented, the policemen came to the fore. With the lockdown, the providers of essential supplies made their presence felt: milk, vegetables, grocery, newspaper, water, electricity, telecommunication and banking among others. To stem the exodus of migrant labour, the good Samaritans sprung up from every nook and corner and started kitchens to feed the needy.

More or less like the various stages of the journey of corona virus, the list of corona warriors also expanded. Thus, suddenly, a large number of organisations and individuals jumped into the fray and there was a fair bit of mixing and cross-fertilization of roles. Thus the policemen started supplying rations and medicines, the postmen started delivering cash and essential commodities, railway coaches turned into isolation wards and the media started awareness campaigns and gave other assistance to the affected persons.

***We dedicate the back page to all these Real Heroes who made the difference.  
We salute The Corona Warriors!!!***

***- Pratik Bhadkumbe  
- Rageeb ALeem Shaikh***



# **MESSAGE**



**Hon. Director**  
**Directorate of Technical Education, Mumbai.**

I am happy to learn that N.K. Orchid College of Engineering & Technology, Solapur which is well known in engineering education is bringing out the annual college e-magazine "Orchid Aura 2020" showcasing the creative, cultural and academic pursuits of the students.



While the world has stopped due to the covid-19 pandemic, I am overwhelmed to see the Orchidian's positivity and commitment towards their tradition of bringing the magazine. I congratulate the students and editorial team for bringing Orchid Aura 2020 in such difficult times.

I hope these articles will bring hope and optimism in other's lives as we are surrounded with negativity due to lockdown and Corona. I am also sure that this magazine will represent the students' spirit, technical and literary talent.

I wish continued success in your endeavors.

A handwritten signature in blue ink, appearing to be 'Dr. Abhay Wagh'.

**Dr. Abhay Wagh**

# ANNUAL REPORT OF THE INSTITUTE

## 1. Preamble:

I feel great privilege in presenting annual report of our institute for the academic year 2019-20. This is a critical juncture to look back at what the Institute has done in the last one year and where it stands today: Some facts first.

## 2. Admissions:

This year 256 students are admitted to first year engineering and 272 students are admitted to direct second year engineering courses through lateral entry of diploma holders at second year level.

### 2.1 Affiliation to the Technological University-DBATU:

Since academic year 2016-17, Government of Maharashtra has started the Technological University for the State. The university is named Dr. Babasaheb Ambedkar Technological University i.e. DBATU. Our institute is at the forefront in implementing all the initiatives of DBATU.

### 2.2 Courses offered:

The Institute is offering following Under Graduate & Post Graduate courses.



UG Courses	Intake
Civil Engineering	120
Mechanical Engineering	120
Computer Science & Engg.	120
Electronics and Telecommunication Engineering	120
Electrical Engineering	6

PG Courses	
Structural Engineering	18
Computer Science & Engg.	18
Thermal Engineering	18
Electronics and Telecommunication Engineering	18

## 4. RESULTS

### 4.1 University Results:

In the academic year 2018-19, students had excellent academic record and twenty students were university rankers. Their names are as follows:



Name of Student	University Rank
<b>Civil Engg.</b>	
<b>Shravan Sherla (BE)</b>	<b>Ist Rank Gold Medalist</b>
Aditya Lomate (BE)	4 <sup>th</sup> Rank
Balaji Galpalli (BE)	5 <sup>th</sup> Rank
Jyotiba Bhosale (BE)	7 <sup>th</sup> Rank
Sangaram Pawar (BE)	7 <sup>th</sup> Rank
Vaishnavi Kurapati (BE)	9 <sup>th</sup> Rank
Mittaplli Jayendra Krishnasaga (TE)	3 <sup>rd</sup> Rank
Thalange Shreyash Anil (TE)	4 <sup>th</sup> Rank
Dharashivkar Ziya (TE)	6 <sup>th</sup> Rank
Chatla Navin Nagnath (TE)	9 <sup>th</sup> Rank
<b>Electrical Engg.</b>	
<b>Bagban Shifa A. (BE)</b>	<b>1<sup>st</sup> Rank</b>
Dhumma Nikita B. (BE)	2 <sup>nd</sup> Rank
Barkade Aishwarya L. (BE)	3 <sup>rd</sup> Rank
Badavane Vikram C. (BE)	4 <sup>th</sup> Rank
Kairamkonda Bhavana Narasayya (BE)	4 <sup>th</sup> Rank
Khairate Priya M. (TE)	4 <sup>th</sup> Rank
Mhamane Smita A. (TE)	5 <sup>th</sup> Rank
Pawar Ajay Prasad (TE)	8 <sup>th</sup> Rank
Naiknaware Pradnya Ganesh (TE)	10 <sup>th</sup> Rank
<b>E&amp;TC Engg.</b>	
Asmita Suryawanshi (BE)	5th Rank
Nikita Suryawanshi (BE)	7th Rank
Ravina Umbarje (BE)	10th Rank

Detail results are given in the respective department reports. This has become possible due to relentless efforts of our faculty members.

#### 4.2 Prizes to the students:

Special prizes worth Rs. 1.79 lakhs are declared to class toppers for the academic year 2018-19 to encourage students to enhance their performance in academics.

#### 4.3 GATE Results:

NKOCET has a great history of students clearing the national level GATE examination. This year also total 10 students (Civil- 06, CSE- 01, Mech-01 and Electrical- 02) have qualified the GATE examination.

#### 4.4 GRE, TOFEL and IELTS:

The Study Abroad Cell (SAC) is an unparalleled initiative of NKOCET. Various talks, seminars and classes have been conducted for enrolled students in order to make them aware about different aspects of studying abroad. German language classes are also conducted by SAC. In the current academic year, thirteen students have successfully passed GRE & IELTS with high grades for pursuing their master's degree abroad. Eight students have got admission to pursue their MS in universities from Germany, France,



Canada and US. 56 students have enrolled this year for SAC. Details are given in the SAC report.

## 5. NPTEL Courses:

NPTEL (National Program on Technology Enhanced Learning) is a joint initiative of the IITs and IISc. NPTEL has been offering self-study courses across engineering. To take this initiative forward and to encourage more students across colleges to participate in this initiative, we have set up NPTEL chapter in our college. Faculty and students from our institute participated and benefited through NPTEL Certification Courses under NPTEL Local Chapter in this year. I am very happy to mention that more than 2492 students registered for various courses offered in 2018-19.

Mr. Rahul Raut from B.E. Civil Engineering scored 97 marks out of 100 in NPTEL Course conducted by IIT, Bombay. He was amongst Top 2% of certified candidates from all over India.

## 6. Orchid Online Engineering Education System:

### 6.1 Various Online Activities:

During the unprecedented times of Covid-19 Lockdown, the institute devised a unique model of Online Engineering Education through various e-learning

activities. These initiatives were taken for keeping every Orchidian focused and in line with the changing trends of the industry. The syllabus of the academic year 2019-20 was completed by conducting rigorous “Online Classes”. Also, the institute conducted Pre-Placement Workshop for the students during these vacations for the preparations of the students Campus Placements. Also, the faculty members have conducted various Internships by using online platforms like Microsoft Teams for all students in an effective manner. The institute also arranged numerous webinars by inviting industry experts through online mode.

### Online Teaching-Learning Initiatives:

The Covid-19 pandemic and the resultant lockdown was the challenge for our institute at the first week and then we started conducting online lectures through Zoom app. After one week all our faculty and students were expert in handling various apps used for online teaching learning. From March 2020 till date we have conducted many online activities and many are being used extensively in Sem I of AY 2020-21 which are as follows:

- **Online lectures** – Use of Microsoft Teams, Google classroom, G-Meet for online lectures, sending



recorded lectures to students, Sharing links of NPTEL lectures for some topics.

- Online Practicals using VLab and some faculty members are recording the hands on practical and sending the recordings to class WhatsApp groups.
- Online Project Presentations were conducted and all projects are completed. Some of the projects are sent to the online project competition of Dassault System.
- Online Internship - Every Student has completed online internship of minimum four weeks. The details are as follows.

#### **FYB.Tech**

- TCSiON Career Edge-Knockdown the Lockdown
- Take your English Communication Skills to the Next Level (Coursera Platform)
- **SY – Civil** – STAAD PRO, REVIT, AutoCad
- **SY – Mech.** – Product Design Engineering in association with AutoDesk, Tata Steel – Many courses
- **SY – CSE** – Python, C programming – Coursera
- **SY – ENTC** - Aurdino, PCB Design, Mobile Application Development,

Python

- Online Training and Placement activity
- Online Pre-Placement Workshop is conducted by our faculty members for the students who are entering in final year in AY 2020–21. During forty days, Online Pre-Placement workshop students were trained in aptitude, technical skills, GDs, Interview techniques, programming skills etc.
- Our students are using the online apps and sites such as Quizstar, BTechGuru App for aptitude preparation and quizzes.

**Online Parent Meetings** - Our institute is following the proctor teacher concept since inception. Proctor group wise parent meetings were conducted online and resolved the queries of students and parents.

#### **Online Initiatives for Extra Curricular Activities by our institute**

- We have organized E-Gathering (Rainbow 2020) in which students organized cultural event, E–sendoff for final year passed out batch, E-Magazine (Orchid Aura) will be published shortly. We have formed





department wise student's association to celebrate various functions by the students in the department.

### 6.1 VLab Nodal Center:

The institute has Virtual Lab Nodal Center of IIT-Bombay. The institute conducts various workshops for Engineering and diploma students, faculty members. We conducted practical sessions of various subjects through this platform during the lockdown period.

Also, we have conducted workshops for Junior college students and faculty members through OLABS.

## 7. TRAINING & PLACEMENTS:

### 7.1 Students' Placements:

Under the guidance of the Placement Dean Dr. Ravindra Patil till date around 62 companies conducted placement activities for our student and total 389 students are placed in various companies as on 25th August, 2020. The campus recruitments are still ongoing.

### 7.2 Co-Curricular Courses Organized by different Departments:

Following add-on courses are conducted by different departments for the students to make them industry-ready and first day productive engineers.

Civil Engg. - STAAD-Pro, Revit, MS

Project, AutoCAD

**E&TC Engg.** - C, C++ Programming, PCB Design, Embedded System Design, Python, Robotics, Mobile App Development

**Electrical Engg.** - PLC & SCADA, PCB Design, AutoCAD, Solar Energy, "IndustrialAutomation"

**Mechanical Engg.** – PDE in association with Autodesk, Integrated course in Catia V5, CNC Machining, C ++ programming

**CSE:** Python, Java, php, Android Application Development, Cloud Computing, Software Testing, C Programming

### 7.3 Soft Skills Training:

A novel concept of soft skill training was introduced for engineering students which comprised of 4 modules meant for personal and professional advancement of future engineers. Self-development, SIP preparations, placement preparations and mock interviews are basic themes for four modules respectively. Group and personality training were implemented as per requirement and need analysis done by soft skill trainers Dr. Mumtaj Shaikh, Mr. Shivaji Chavan and Mr. Umakant Jadhav.

During the lockdown period, Soft Skills trainers conducted well organized Pre Placement Workshop for 43 days. The



workshop included mock interviews, Group Discussion practices and Verbal ability training and mock tests on both aptitude and verbal ability which helped students to prepare for the employability skills.

## **8. FACULTY ACTIVITIES:**

### **8.1 Higher Education of Faculty Members:**

Presently, 12 faculty members are pursuing their Ph.D. at various renowned institutes.

### **8.2 Faculty Achievements:**

Dr. M. S. Dafedar has been awarded with PhD in July 2019 in Mechanical Engineering (Thermal science) from VTU, Belgavi, Karnataka. His research topic was "Conjugate Conduction Convection Heat Transfer Analysis of Rectangular Plates with Heat Generation, Cooled with Different Coolants".

Dr. N. R. Patil has been awarded with PhD in Mechanical (Design) Engineering by NITK Surathkal. His research topic is "Characterization of Fiber Reinforced Epoxy Matrix Composite with Sintered Bronze and Graphite Fillers".

Dr. Mumtaj Shaikh has been awarded Ph.D. degree in English from Shivaji University Kolhapur. Her research topic was "Nostalgia in the Novels of Jane Urquhart: A Study."

### **8.3 Faculty Publications:**

Faculty members are encouraged to keep pace with recent developments in their respective fields by publishing papers in international and national journals and conferences.

Total 37 papers are published by faculty members in this academic year. Summary of the publication are as follows:

International Journals: 37

International Conferences: 2

Details of publications are given in respective department reports.

### **8.4 Winter and Summer Schools Attended by Faculty Members:**

Total 76 faculty members from different departments have attended winter and summer schools at different institutes.

### **8.5 Faculty Development Programmes Organized:**

Our aim is to keep the faculty updated continuously with the exposure to latest trends and techniques in Engineering field. The faculty development cell is headed by Prof. I.I. Mujawar, Dean, Academics. Our college is a remote center for conducting various workshops under ICT organized by IITs and funded by MHRD, India. We have organized two workshops in this academic year as follows:



Name of workshop	Duration
Linux main workshop	23 August 2019
One day workshop on eSim, a First Course in the IoT Series for Teachers	21 Sep 2020
One Day Workshop on Arduino	8 Feb 2020
One Day Workshop on C/C++ on	29 February 2020"
C and C++ Coordinators' workshop"	15 February 2020
One day Workshop on R	9th November 2019

## 9 INDUSTRY CONNECT:

### 9.1 Implant Training & Summer Internship Program

Only theoretical knowledge is not sufficient to understand various aspects of engineering. Every young engineer shall undergo Implant training to enhance the technical knowledge. Second Year and Third year engineering students from all the branches underwent minimum two weeks Industry training at various industries across the country in winter vacations. During this summer vacations, due to lockdown students did internship through various online platforms like Coursera, Udemy, TCSion, Tata Steel, etc.

### 9.2 MoU with Industries:

To enhance the Industry-Institute interaction, we have focused on

solving industrial problems through our resources. Lot of effort is put on this front; Different industries also have shown their interest in this endeavor.

#### 1. CADCAMGURU Solutions Pvt Ltd, Pune.

MoU is signed with CADCAMGURU Solutions Private Limited, Pune on 27th November 2019 to train the students and staff of "NK Orchid College of Engineering and Technology, Solapur" in the field of CAD/CAM and industry required skills.

#### 2. Tata Technologies Ltd, Pune

MoU is signed with Tata Technologies Ltd, Pune under Prayatna Scholarship for the innovation and development of "Two Seater Solar Vehicle". TTL has sponsored 1.5 Lakh Rupees for developing this Solar Vehicle.

#### 3. MOU with Zensar Technologies, Pune

CSE Department has signed MOU with Zensar Technologies, Pune. Under Corporate Social Responsibility, Zensar provides Employability Skill Development Program (ESD) to seventy-six shortlisted students of CSE department and forty-seven students from E&TC department. The training includes Soft Skills training and technical training as per industry requirements. At the end of the training the



best performers are given an opportunity to be a part of Zensar Technologies. 123 students have undertaken ESD training in academic year 2019-20.

## 10. STUDENTS' ACHIEVEMENTS:

### 10.1 Special Achievements of the Students

Team ASHAWMEDH secured 45th Rank at Supra SAE India Student Formula Race Car Competitions held at Greater Noida, Uttar Pradesh from 15th to 20th of July, 2019. Total 26 students participated in the competition.

Team ASHWAMEDH has participated in the prestigious Formula BHARAT competition which will be held at Coimbatore, Tamilnadu in January 2021. The team has cleared the first Quiz round and now we are good to go for Vehicle making. 18 students are participating for the competition along with Prof. Prasad N Kulkarni as faculty Mentor.

### 10.2 Participation in Avishkar 2019-20:

DBATU Zonal level Competition Avishkar-2019-20 was organized at Nutan College of Engineering, Maval, Pune on 9th November 2019. 06 Students enthusiastically participated under various project competitions.

The project Portable Refrigeration System for Vaccine Distribution to Remote Location under pharmacy and medicine

category, presented by Yaseen Khan Dakhni bagged second rank in zonal Level, first rank in University Level organized by DBATU Lonere on 3rd January 2020, and second rank at 14th Maharashtra State Level Inter University Research Convention Avishkar 2019-20 held at Mumbai University between 29th - 31st Jan 2020.

The same project was selected for Anveshan 2019-20 West Zone Inter University Student Research Convention organized by Association of Indian Universities, New Delhi and Department of Students' Development, University of Mumbai.

IIT Bombay conducts e-Yantra Robotics eYRC competition at national level. Our college's 11 groups were selected comprising of four students in each group. They also carried out various tasks assigned to them. It was in online mode under eYantra mentorship.

### 10.3 College Magazine:

It's been a remarkable achievement that our college magazine "Orchid Aura-2019" has won Second prize at Solapur University level Technical magazine competition "Srujanrang" and won thirty-six individual prizes in various sections.



#### 10.4 Orchitech-2020:

A National Level Student's Technical Symposium OrchiTech'20 was organized on 11th March 2020 in the institute for Diploma students. Total 489 students participated from various Diploma colleges from in and around Solapur. Events were planned in five groups. Total 20 events were conducted for Diploma students. Following different Events were organized in OrchiTech'20.

Dept.	Name of Event
Civil	Project Gala
	CAD Mania
	Built -Up
	Quizz-Buzz (Non-Tech)
CSE	C Booster
	Digital Treasure Hunt
	JAVA BattleGround
	WarFare(Non-Tech)
ENTC	Project Exhibition
	Treasure Hunt
	Circuitrex
	Get Over It(Non-Tech)
ELE	EE Spardha
	Hardware Project
	Electro Treasure Hunt
	Chase the Target(Non-Tech)
MECH	CADWAR
	Technical Quiz
	Lathe Mate
	TreasureHunt(NonTech)

Prof. Prasad Kulkarni worked as Convener & Mr. Akshay Kadapa worked as Student Convener.

#### 11. Institute Social Responsibility:

The institute has always been at the forefront in social advancement events. We also believe that educational institutes are equally responsible for Social transformation. Through our 'Institute Social Responsibility' initiative we have coordinated many such events. NKOCET has always supported numerous activities in various capacities which are of benefits to the society.

As part of social responsibility Orcihdians came up with an innovative idea of bringing extra chapatti in the tiffin everyday which was donated to the needy ones, orphanages and Old age homes. We have donated more than 14000 chapatis for the social cause which is remarkable.

The institute conducted online sessions for Career Awareness for Junior college students and Diploma students. The sessions were also conducted for Junior College and High School teachers through online platforms.

#### 12. Institute Foundation Day:

On the occasion of our Institute Foundation Day which falls on 19th January 2019, the renowned social worker



Hon. Sindhutai Sapkal addressed the gathering. The institute also honored Prof. Madhukar Doiphode, President, Paani Foundation, Surdi village, Tal. Barshi, Dist. Solapur for the outstanding water conservation work done by the village. Representatives of all the Engineering and Diploma college students along with their Faculty members were invited. The program was a grand success as almost 2000 people across all the spheres were present.

I thank the management for their excellent support and my enthusiastic team of students, teaching and non-teaching staff for their efforts and commitment towards development of the institute.

**Dr. J.B. Dafedar**  
Principal





***We Salute the  
Corona Warriors***

CORONAVIRUS  
[COVID-19]

