



Shri Shamrao Patil (Yadavkar) Educational & Charitable Trust's

# SHARAD INSTITUTE OF TECHNOLOGY, COLLEGE OF ENGINEERING

Yadav (Ichalkaranji), Dist.-Kolhapur (Maharashtra)

• NBA Accredited Programmes • NAAC 'A' Grade Institution • An ISO 9001:2015 Certified Institute

An Autonomous Institute

# APEX

...A Newsletter

Department of  
Mechanical Engineering 2020-21

VOL: 01 ISSUE: 01

## Themes Inside

Department Vision, Mission & Quality Policy

Department PEO's and PSO's

Sharad Pattern

Best Practices

NPTEL Awareness Program

MESA Activities :

Poster presentation competition

Autodesk Activities

Expert Guest Lectures Conducted

NSS Activities

ISHRAE

Industrial Visits



**Hon. Dr. Rajendra Patil (Yadavkar)**  
Chairman

Shamrao Patil (Yadavkar)  
Education & Charitable Trust

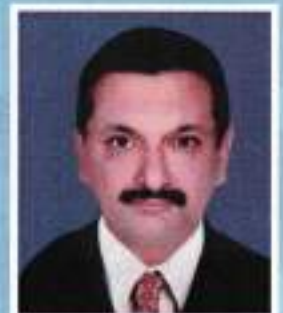


**Hon. Mr. Anil Bagane**  
Executive Director

Shamrao Patil (Yadavkar)  
Education & Charitable Trust



**Dr. S. A. Khot**  
Principal



**Dr. P. M. Bhagwat**  
HoD, Mechanical Engineering

## | MESSAGES |

### **From Executive Director Desk:**

I am happy and glad that Sharad Institute of Technology College of Engineering Department of Mechanical Engineering is releasing out "APEX" Newsletter of AY 2020-21 Volume 1 Issue-1. Bringing out a the department "APEX" Newsletter will definitely help to showcase the activities that are happening in the department campus. It also helps in building up teamwork which is very much needed today in the world of competition. It provides a platform for exposing the merits and academic achievements of the faculty and students. This enhances the documentation culture of the institute. This would definitely create an impact in the minds of readers, by way of providing larger visibility and dimension to the campus. I hope that this culture of releasing Newsletter continue forever and become a quoted example for all other colleges to follow.

### **From Principal Desk**

I am extremely delighted to know that faculties and students of Mechanical Engineering Department of Sharad Institute of Technology College of Engineering, bringing out their departmental "APEX" Newsletter of AY 2020-21 Volume 1 Issue-1. This will benefit all the students as they can now be inspired for greater heights by knowing about the Department's achievements. This will also foster professional and social networking from time to time. It indeed creates a great feeling to know about the initiative taken by the Department to facilitate the students with necessary information, record keeping as well as increasing student capabilities through active participation. Students have exhibited a great zeal and enthusiasm and have contributed significantly. The editorial team has initiated something that will continue to help and guide present and upcoming students of the Department. Personally, I feel that students of Sharad Institute of Technology College of Engineering should set standards and create environment so that they excel in their areas of interests and accordingly guide more and more SITCOEians in future. On our part we will continue to swirl to make achievements for you. We wish you all the best in your endeavors.

### **From Head of the Department Desk:**

I am very happy to publish Volume 1 Issue-1 of our department newsletter "APEX" of AY 2020-21. Our Mechanical Engineering department has been consistently working towards the goal to produce highly skilled and scientifically oriented manpower through flexible, adaptive and progressive training programs along with cohesive interaction with the research organizations, academicians and industries. The strength of the department is its well qualified and experienced faculty members & supporting staff with well maintained laboratories. "APEX" provides good platform for student to update their technical skills. I congratulate "APEX" team for their efforts in launching second issue. Wish you all a happy learning here.

## EDITOR MESSAGE

From Faculty Editor Desk



**Mr. Utkal S. Patil**  
Assistant Professor  
Dept. of Mechanical Engineering

**Dear Readers,**

It is indeed a great honor to be the "APEX" Newsletter Editor from Department of Mechanical Engineering, SITCOE. And it is an immense pleasure to presenting you with the Volume 1 Issue 01 of AY 2020-21.

Our motto is to put forth two Issues of Newsletter in a year. A huge thank you to all for the efforts taken by the department faculty, our students who contributed in this "APEX" Newsletter, without which there wouldn't have been this newsletter issue. Last but not least, I would like to thank Beloved Hon. Executive Director, The Principal, Head of the Department and Faculty members for their everlasting support throughout the creation of this edition.

From Student Editor Desk



**Miss. Asiya S. Pendhari**  
B.Tech  
Mechanical Engineering

**Dear Readers,**

We are happy to bring out the Volume 1, Issue 1 of our News Letter "APEX". Our Faculty diligently involved in encouraging students and preparing for a bright future.

I am glad that I am part of this News Letter preparation and release. I am very much thankful to our Department Faculty members and my team members for helping me in making this "APEX" News Letter of AY 2020-21.

## STUDENT COMMITTEE MEMBERS

**Mr. Tushar Kate**  
Publisher

**Ms. Shraddha Mahadik**  
News Head

**Dear Readers,**

We are back with yet another issue. Though, the events of high importance kept us all busy but we are never too far away, not to reach our readers. We are late, but we are here! The issue has a lot of interesting Campus news which will tell you how our quiet looking campus is always abuzz with activity underneath. It is the efficiency of our students and staff that so many activities of different flavours keep taking place and yet the schedules and daily activities don't get disturbed. Infact on surface it is all so calm while a strong current of activity flows underneath. I take this opportunity to congratulate our students, Ananda Krishna and Shikhil Sharma to have made NIIT University proud in China by winning the first prize in the 6th All China University Software Innovation & Entrepreneurship Competition. We are all proud of you dear students! The Expressions section has quite a variety this time. We have a poem, an article, our regular feature, The Winter Leh Diary and a set of pictures captured by student Prashant Prakash. I hope you enjoy going through the newsletter and will also send us your opinions and suggestions to improve it further.

## | VISION |

To be a center of excellence in Mechanical engineering education to prepare professionally competent engineers with lifelong learning attitude for the accomplishment of ever-growing needs of

## | MISSION |

- To prepare technically and professionally competent engineers by imparting quality education through effective teaching learning Methodologies and providing stimulating environment for research & innovation.
- To develop professional skills and right attitude in students that will help them to succeed and progress in their personal and Professional career.
- To imbibe moral and ethical values in students with concern to Society and environment

## | QUALITY POLICY |

We at Mechanical Engineering promote capacity building through education and training quality in the field of Mechanical Engineering to comply with the requirement and continually improve the effectiveness of the quality by involving all stakeholders upgrading facilities and faculty through continuous improvement.

## | PROGRAM EDUCATION OBJECTIVES |

- PEO I: Demonstrate capabilities to develop optimal solution to the real world engineering problems by applying theory based practical approach of engineering and related engineering disciplines.
- PEO II: Exhibit professional skills, ethical attitude and sensitivity towards society and environment.
- PEO III: Engage in lifelong learning for successful adaptation to technological changes.





Education is not the amount of information that is put into your brain and runs unrest there, undigested all your life. We must have life-building, man making, character making and integration of ideas. As Swami Vivekananda has aptly said:

"We want that education by which character is formed, strength of mind is increased, the intellect is expanded and by which one can stand on one's own feet".

Today we live in twenty first century. It is an age of inventions and innovations. So, what do you want from education system: to make you just a 'LITERATE' or an 'EDUCATED'. The very word education is derived from the word "Educaire" which means "to bring up". To bring up each and every stakeholder of the system in every aspect it may be economical, social as well as personal. In Sharad Pattern we are committed provide these things.

Education system should not just produce students only as human resource and make them 'knowledge products' and 'services'. But it should aim on all round shaping up of one's personality. In the present system a teacher's concern should be on-not just imparting knowledge but also tapping the inherent talents of a student. Because every human being can be an engineer but not every engineer can be a great human being so we are committed to make student great human being who can lift up others by standing on his/her own feet.

We in Sharad pattern yearn the socio-economical development of all members of SIT family, first and foremost the parents who are actually determining factor of all, then students who are the asset for us, next its faculty from apex to nadir who are backbone of the system and finally the management the prime drive that motivates all of them to work, So we maintain this perfect square by working in unison.

Education should not be limited to books but it needs to be full of interaction, exposure and opportunities. In my opinion, co-curricular activities should be made an integral part of education for the overall development of the student. Besides books and the rat race, the students should be made to follow the moral values. Last but not the least the education should be transformed into a practical process where apart from the texts, there is a space for the students to create new ideas, activities should also be held like - project exhibitions where student can come up with their new ideas, imaginations and try to create something new something more interesting.....they could try to implement it and move beyond the books. The need of the hour is not just an academic education but we need more practical and value based education. It should be like the words of Swami Vivekananda—"Man making education is what we want

And after all "The education which does not help the common mass of people to equip themselves for the struggle of life, which does not bring out strength of character, a spirit of philanthropy, and the courage of a lion - is it worth the name? Real education is that which enables one to stand on one's own legs. Education must provide 'life-building, man-making, character-making assimilation of ideas". The ideal of this type of education would be to produce an integrated person. We are proud to say that we with the help of Sharad Pattern are actually implementing these things rigorously from its inception and we will take ceaseless endeavors to accomplish everything that has been promised by us. Besides this we will also be an Alma Mater i.e. Caring mother of all its family members.

## | BEST PRACTICES |

### Certification courses in Innovation Centres

#### Objectives:

1. The main objective is to provide additional skills to the students which will help them for the placement.
2. To collaborate students with the various industry initiatives

**Context:** Institute has developed various innovation centers in every department to facilitate students with upcoming technologies and make use of the facility for research and development activity. These centers are over and above the AICTE requirement so no academic lecture practical scheduled on the same. These centers are maid full time available to the students for learning new things. But it is observed that many students are not participating in such activities actively. Also, many students learn and develop some skill sets but they unable to claim the same in front of other peoples. So to give them authentication and encouraging students for active participation certification programs were started.

**Practice:** With respect to the above context every innovation center started some certification courses in association with supporting industry. In the first phase students are motivated to participate in the learning process. Students who successfully completed the course undergo certification exams and those who get cleared are getting more job opportunities compared to other students. Some certification courses were started by third party agencies or supporting organizations. Some certifications were started by the Innovation center itself. Design and innovation center powered by Autodesk India Pvt. Ltd. doing certification to students with online courses and examinations started by Autodesk University. Institute also runs the Ready Engineers program powered by Tata Technologies Ltd. Students who completed the course successfully and cleared examinations got Ready Engineer certification. The Center of Excellence in VLSI and embedded system runs the courses for the students. Students after completion of all three modules of course certification were given by the institute itself. Similarly, other centers of excellence are working.

**Impact:** Number of students actively involved in learning in the innovation center. More than 200 students got certification in various courses at Autodesk University. This helps students for placement. 11 students got a placement on the basis of skill sets available in the field of design. 100 students got the certificate as a ready engineer. All students got the opportunity of placement drive organized by Tata Technology. Center of excellence in VLSI and Embedded system gave training to 50 students of Electronics and Telecommunication in association with UTL Technologies Bangalore.

### **NPTEL Awareness Program**

- Goal:**
1. To motivate students and faculty for Self learning activities.
  2. To create ICT Tool usage awareness

**Context:** Institute has very good academic culture. In our region institute is very well known for academics. To do improvements in academics, self learning of students is most important. Many recruiters also recognized need of self learning. In connection with this institute decided to motivate students as well as faculty members to participate in MOOC courses. Being an affiliated institute we are unable to give credit transfer benefit to student but even students provided great support to such extension activity.

**Practice:** IQAC committee gave instruction for the implementation of NPTEL awareness among students. Initially institute is registered under NPTEL local chapter. Mr. G. V. Pujari working as SWAYAM NPTEL SPOC person. At institute level we created committee of NPTEL. From all department one contact person is selected who encourage students and faculty members to participate. Initially maximum focus is provided on registration for course. Then in next phase students active participation is observed. For that faculty mentors are appointed. Finally students and faculty members are motivated for registration in examination. Fee Reimbursement scheme was launched for year 2018-19 from institute side for the students who cleared the examination. Students who scored more than seventy percent marks are felicitated by the institute. This also create positive impact on students side.

**Impact:** As first step of success 1505 students registered for different courses. They tried to learn the basics. Some students continued the same but few were fail to complete the same. Out of those 155 students appeared for the examination and out of appeared students 139 students cleared their examination. All students who gets cleared are felicitated by the institute. Also they got benefit of fee reimbursement.



## MECHANICAL ENGINEERS STUDENT ASSOCIATION (MESA)

### Activity Report

#### About MESA

Mechanical Engineers Student Association (MESA) of Sharad Institute of Technology College of Engineering, Yadrav plays a pivotal role in the development of students as Engineers with the various activities based on Curriculum and Extra Curricular Activities. It not only helps the members of the association a sense of appreciation and respect among each other also it gives an awareness and sense of appreciation with other disciplines also. MESA being an active association inspires and gives a platform to improve their career interests.

#### Poster Presentation competition under MESA

MESA has organized Poster Presentation competition through online mode. In this activity many students were participated and present their posters.

1<sup>st</sup>  
Rank

Presented by:



Ms. Shreya D. Terdale



#### A WAR AGAINST COVID-19 PANDAMIC



Presented by:



Mr. Shreyas S. Shete

2<sup>nd</sup>  
Rank

3<sup>rd</sup>  
Rank

Presented by:



Mr. Aniket Patil

#### DEAR DOCTORS AND NURSES WE SEE THE REAL 'GOD' IN YOU. Thank you.







Design & Innovation Center  
Autodesk, USA

### Objectives

- To provide students the knowledge information of 3D Mechanical design, visualization & documentation processes that student will use to complete the project for the competition.
- Student would get an opportunity to lay hands on Autodesk design software, understand principles of 3D design & clear doubts

### Outcomes Expected

- Develop Physical/Prototype models for multidisciplinary projects.
- Develop an optimized design for product research and development.
- Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health, safety, manufacturability, and sustainability.

### Utilization




- This design & innovation centre has 40 workstations with multiple licenses of the entire suite of Autodesk software's running on them.
- These includes Autodesk Fusion 360, Inventor Professional, Autodesk AutoCAD etc.
- These licenses will be used exclusively for educational purposes directly related to learning, teaching, training, research and development that are part of the instructional functions.

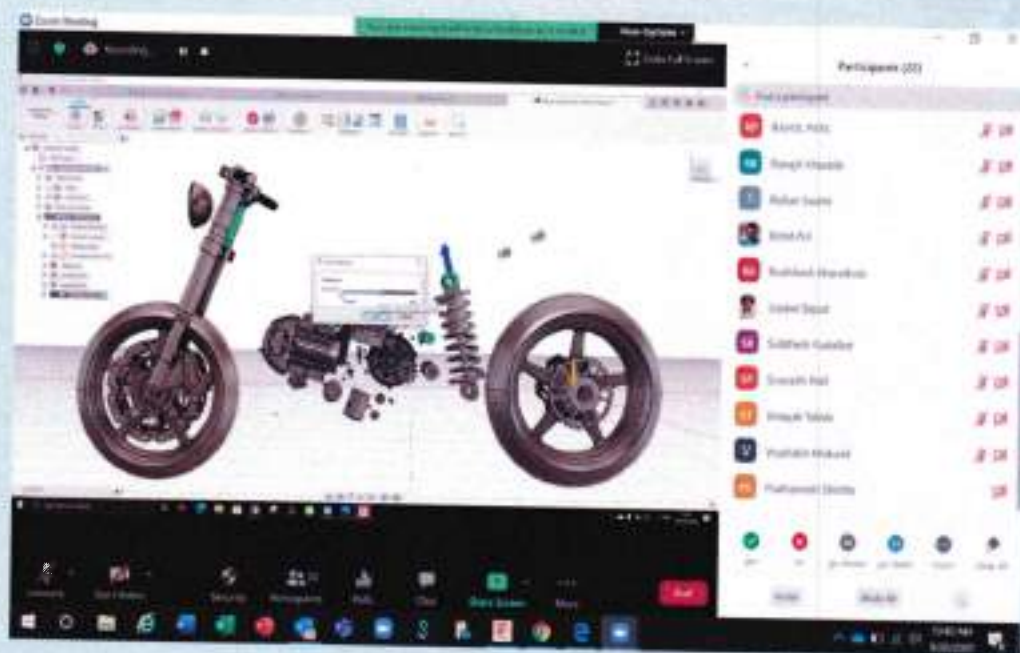
Sr.No.	Name of Activity	Date	Conduct by	Student Participant count	Duration of Activity	Remark
1	Generative Design webinar	19/09/2020 to 20/09/2020	AUTODESK	60	2 Days	Attended 58 students from SITCOE conducted by AUTODESK
2	Generative Design competition	21/09/2020 to 22/09/2020	AUTODESK	20	2 Days	Attended 10 students from SITCOE conducted by AUTODESK
3	Autodesk Design Academy Course Certification (online)	Month of October	College	120	Month of October	Completed

## | WEBINAR ON GENERATIVE DESIGN USING FUSION 360 |

Generative design is the future of design technology. Easy generating results, significant weight reduction, better support output makes this technology very reliable and profitable to the industry. The webinar conducted by Mr. Rohit Chandran (Education Engagement specialist @AUTODESK India, for two days.

Competitions Arranged for Students by Autodesk & SITCOE on September 2020. There were 30 students who were participated from our college & gained benefit from this program.

 Since Sharma Path, Yadavkar) Educational & Charitable Trusts <b>Sharad Institute of Technology College of Engineering</b> <small>MSL Accredited Programme - AICTE &amp; OBE Institute Accredited by NAAC - ISO 9001:2015 Certified Institute                  Recognized by AICTE and UGC of the UGC Act - 1956</small>		 AUTODESK FUSION 360	
<b>FUSION 360 GENERATIVE DESIGN WEBINARS &amp; DESIGN COMPETITION</b>			
Powered By  <b>AUTODESK</b>			
We are excited to bring you a Fusion 360 Generative Design webinar series and a Design Competition to explore your design skills. Register for the webinars and participate in the design competition. Get a chance to win exciting prizes from Autodesk, India. All the participants will get a participation certificate from the company.			
To learn about this amazing generative design technology, attend 2 days webinar series on "How to set up Generative Design study in Fusion 360" hosted by Mr. Rohit Chandran (Education Engagement Specialist At Autodesk) on 19th & 20th September 2020, 10:30 am to 11:30 am.			
For any queries feel free to contact, Mr. Sudhanshu S. Rankhambhe (Autodesk FCI) 8308767121 sudhanshu29399a@gmail.com			
Address for Correspondence: Sharad Institute of Technology, College of Engineering Near Chhatrapati Shivaji Maharaj, Shivajinagar, Pune-411005 Ph: 020-2299 9999, Fax: 020-2299 9998, Email: info@sitcoe.edu	<b>Shamsh Pathan</b> 98900 88888 98900	<b>Rohit Chandran</b> Education Engagement Specialist 98900 88888 98900	<b>Dr. Sudhanshu Rankhambhe</b> (Autodesk FCI) 8308767121 8308767121
<b>A.A. Desai</b> Design Professor 98900 98900	<b>Dr. S. S. Rajeev</b> Dr. S. S. Rajeev 98900 98900	<b>Dr. Satish A. Khair</b> Design 98900 98900	<b>Prof. Dr. Anil A. Rajeev</b> Design Mentor 98900 98900



## A. Projects Completed

### 1. Design and Development of Land Mines Detection and Marking Robot

**Project Description:** This could discuss experimental results achieved with a robotic countermine system that utilizes autonomous behaviors and a mixed-initiative control scheme to address the challenges of detecting and marking buried landmines. By correlating aerial imagery and ground-based robot mapping, the interface provides context for the operator to task the robot. Once tasked, the robot can perform the search and detection task without the use of accurate global positioning system information or continuous communication with the operator.

Results could show that the system was able to find and mark landmines with a very low level of human involvement. In addition, the data indicates that the robotic system may be able to decrease the time to find mines and increase the detection, accuracy and reliability.



### 2. Design & Manufacturing 3D Printer with Multi Nozzle Technology



**Project Description:** This is the additive manufacturing procedure of using multiple materials at the same time to fabricate an object. Similar to single material additive manufacturing it can be realized through methods such as FFF, SLA and Inkjet (material jetting) 3D printing. By expanding the design space to different materials, it establishes the possibilities of creating 3D printed objects of different colour or with different material properties like elasticity or solubility.

### 3. Hydraulic Scrap Baling Machine

**Project Description:**

- A baling machine is a device used to compress materials into a bale form which is easy for storage, transport and handling
- The bale can be formed into square bales
- A simple hydraulic system consists of hydraulic fluid, pistons or rams, cylinders, oil reservoir, a complete working mechanism, and safety devices



### 4. Spring Stiffness Testing Machine



**Project Description:**

Spring Stiffness Testing Machine is used for checking the stiffness of valve springs of IC engine, here a load cell is used which measures the deflection at the applied load and it is controlled electronically this is done by stepper motor. After the testing if spring stiffness is within the limit then it shows green light else a red light.

## B. Jig- Fixture related projects

### 1. Design and Development of Land Mines Detection and Marking Robot

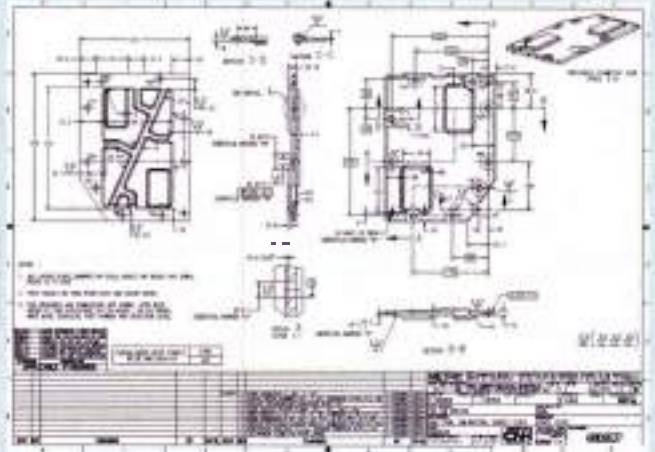
#### 1) Design & Manufacturing of industry fixture

**Company Name:** Arati Enterprises

**SOFTWARE USED:** Autodesk Fusion 360

**Name of student:**

- Shivam Dhanawade
- Milind Bhagwat
- Aditya Dhavale
- Surajbhan Singh
- Ashitosh Harugire



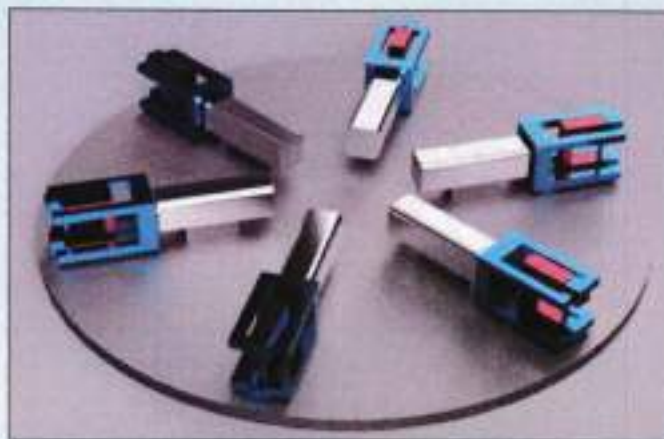
### 2. Design & Manufacturing of SPM & Jig -fixture for throttle shaft

**Company Name:** Cygnet International Private

**Limited SOFTWARE USED:** Autodesk Fusion 360

**Name of Student:**

- Omkar Karangale
- Vinod Koli
- Rushabh Managave
- Rushabh Adagane



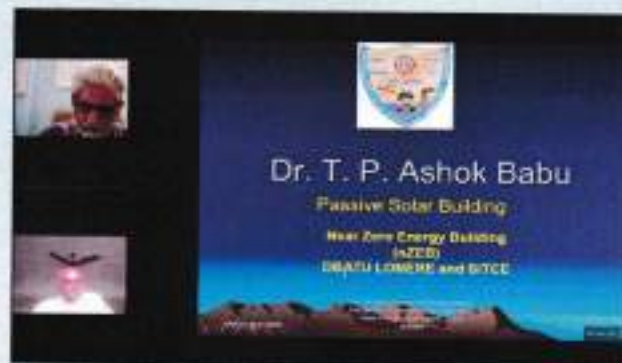


## EXPERT LECTURES CONDUCTED

Department	Mechanical Engineering
Activity Title	Solar passive Building
Activity conducted date and time	11-10-2020, 10.00 am
Resource person for Activity	Prof. Dr. T. P. Ashok Babu
Class	All
Purpose	Guest lecture

### Summary:

He told about natural calamities, global warming, destruction of ozone. He discussed about the impact of a refrigeration system on the global climate. He discussed about energy generation and energy conservation in residential building and commercial building. He concentrated on passive building for cooling and heating load calculations. He discussed FEA formulation for analytical solution to periodic heat transfer problem.



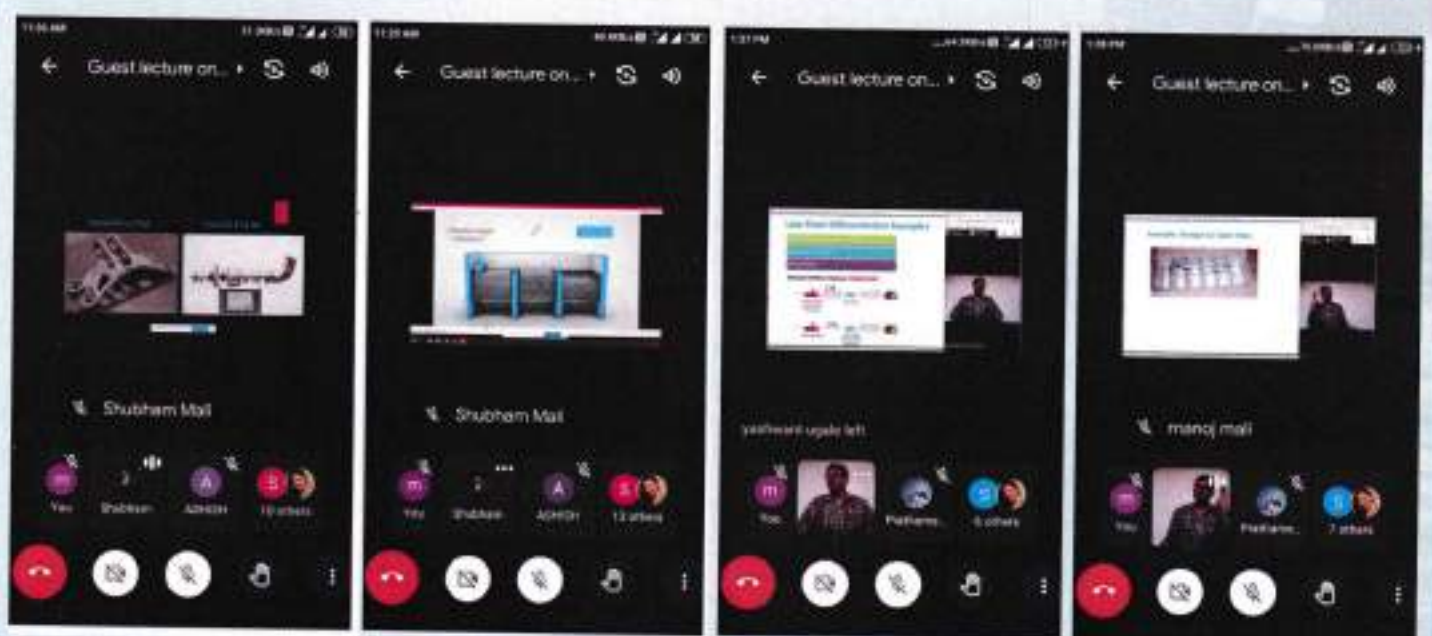
Department	Mechanical Engineering
Activity Title	Energy Efficient Appliances
Activity conducted date and time	12-10-2020, 10.00 am
Resource person for Activity	Dr. D. T. Barki
Class	All
Purpose	Guest lecture

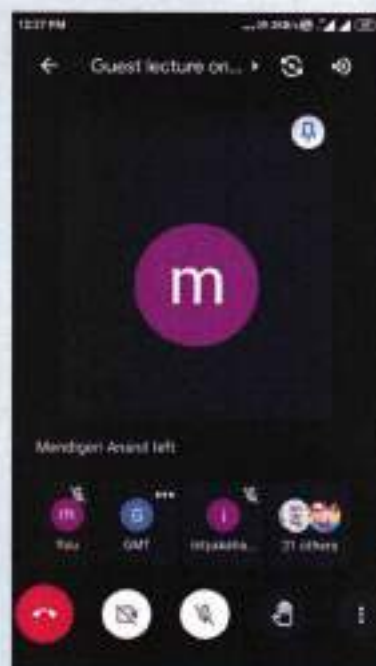
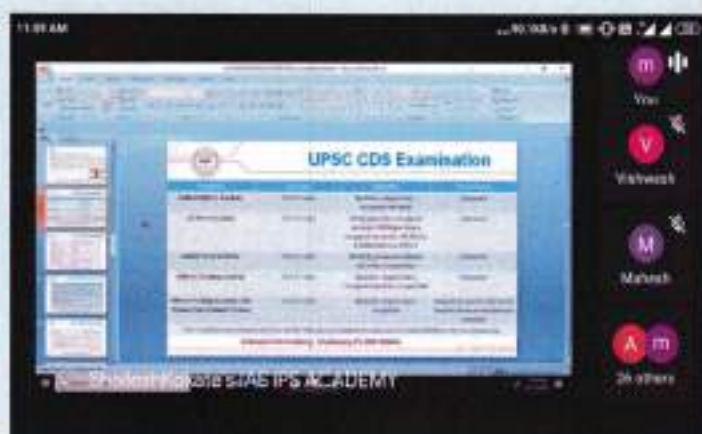
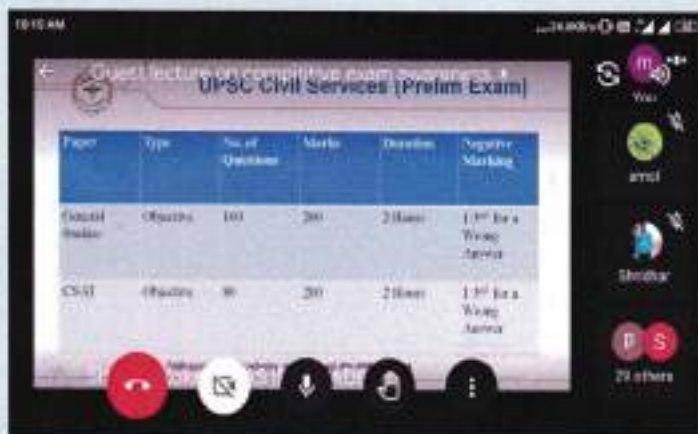
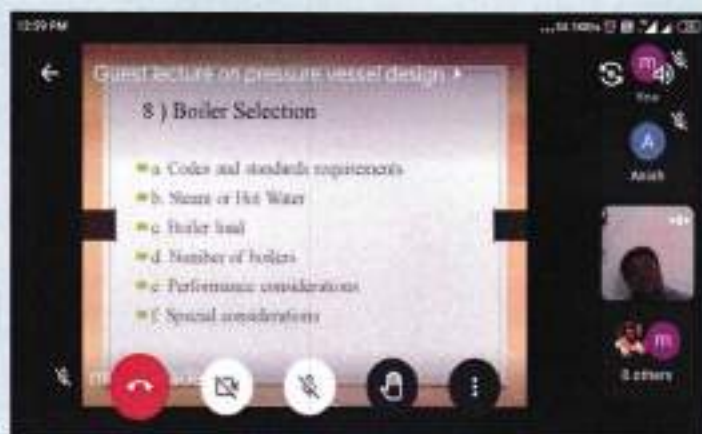
### Summary:

He elaborated presentation through three parts solar PV design for BIPV, solar PV tiles, Solar PV technology. He discussed about challenges in building integrated PV such as orientation of building, system configuration. He elaborates how to use PVSYST for design of PV system with features of PVSYST. He described construction of PV system. He also elaborates manufacturing steps of solar PV system.



Sr.No.	Day and time	Topic	Name of resource person	Institute / Company
1	11th August 20 (10:30 am to 12:00 Noon)	Solar passive Building	Prof. Babur Ashok NITS	NIT Surthkal
2	12th August 20 (10:30 am to 12:00 Noon)	Energy Efficient Appliances	Barki B1 Hyderabad	Green KO Group Company, Hyderabad
3	13th August 20 (10:30 am to 12:00 Noon)	Ventilation and cooling	Prof. Muthukumar IITG	IIT Guwahati
4	14th August 20 (10:30 am to 12:00 Noon)	Solar PV system	Prof. Chetansingh Solanki IITB	IIT Bombay
5	3rd November 2020 at 2:30 pm.	BIW Fixture Design	Mr. Swapnil Chavan	CAD Venture Technology Ichalkaranji
6	08 December 2020 at 10:30 pm	Rapid prototyping	Mr. Shubham Mali	Alter 3D services, Miraj
7	05 December 2020 at 10:00 am	Awareness in the competitive exam	Mr. Sharesh Sokate	Siddhant Academy, Ichalkaranji
8	07 December 2020 at 1:00 pm	Product Design and Development	Mr. Manoj Mali	Equipment 7 DC Ador Welding, Ltd, Pune
9	04 December 2020 at 12:10 pm	Boilers & Its application	Mr. Lahu Rhosale	LAB Engineers, Pune
10	08 December 2020 at 12:10 pm	Industrial challenges in manufacturing and mechanical Engineering	Mr. Suhas Deshpande	General Machine Tools Ltd, Ichalkaranji

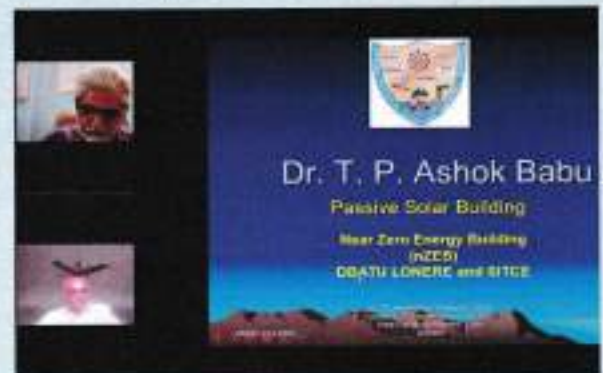






Department	Mechanical Engineering
Activity Title	Solar passive Building
Activity conducted date and time	11-10-2020,10.00 am
Resource person for Activity	Prof. Dr. T. P. Ashok Babu
Class	All
Purpose	Guest lecture

**Summary:** He discussed about natural calamities, global warming, and destruction of ozone. He discussed about the impact of a refrigeration system on the global climate. He discussed about energy generation and energy conservation in residential building and commercial building. He is concentrating on passive building for cooling and heating load calculations. He discussed FEA formulation for analytical solution to periodic heat transfer problem.



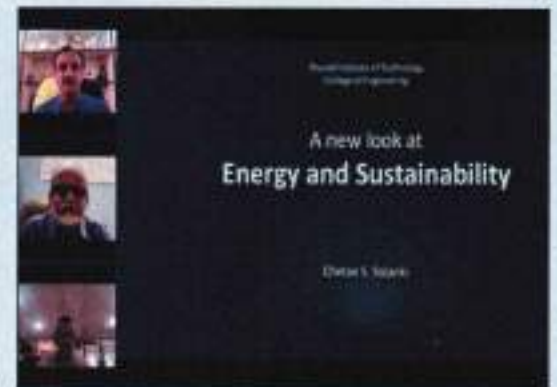
Department	Mechanical Engineering
Activity Title	Ventilation and cooling
Activity conducted date and time	13-10-2020, 10.00 am
Resource person for Activity	Prof. Muthukumar
Class	All
Purpose	Guest lecture

**Summary:** He discussed cooling load calculation and maintenance related issues of HVAC systems. He elaborates key information for load estimation, from ASHRAE handbook. He elaborated load summary for single room with consideration of cooling load components. He also demonstrated how orientation of building influences the cooling load. He discussed different problems of overseeing, energy saving tips for air conditioning. He gave information about the new generation synthetic refrigerants with design aspects and remarks with different case studies.



Department	Mechanical Engineering
Activity Title	Energy Efficient Appliances
Activity conducted date and time	14-10-2020, 10.00 am
Resource person for Activity	Prof. Chetansingh Solanki
Class	All
Purpose	Guest lecture

**Summary:** He emphasized on 17 sustainable development goals about energy. He discussed about challenges in sustainable, long term energy sources. Fossil energy emits CO<sub>2</sub> concentration in exponential nature cause global warming and generates many problems. He gave availability of natural resources per capita for last 20 years. The impact of the global warming on sea water increase, increase in temperature. He also discussed remedies to above problems by using Mahatma Gandhi's laws for sustainability. He also gave information about Energy Swaraj foundation



Department	Mechanical Engineering
Activity Title	BIW Fixture Design
Activity conducted date and time	03/11/2020, 2.30 pm
Resource person for Activity	Mr. Swapnil Sampat Chvan
Class	SE, TE & BE
Purpose	Guest lecture

**Summary:** Mr. Swapnil Chavan has 7-year experience in design department. He shared his experience about industry expectation from graduates. He discussed about different industrial problems that can be designed by using different software like CREO, CATIA. He explained need of simulation software based on computational fluid dynamics for design modification. Further he discussed about BIW fixtures used in Automobile industry. He shared his experience about Fixture design. He also suggested for students to learn CAD software and its application for field problems.



## | NATIONAL SERVICE SCHEME (ACTIVITIES) |



The National Service Scheme (NSS) is an Indian government-sponsored flagship for public service program conducted by the Ministry of Youth Affairs and Sports of the Government of India.

National Service Scheme (NSS) was introduced in 1969 with the primary objective of developing the personality and character of the student youth through voluntary community service. 'Education through Service' is the purpose of the NSS. The ideological orientation of the NSS is inspired by the ideals of Mahatma Gandhi.

**Benefit for Students/ National Service Scheme Volunteers.** It helps in acquiring leadership qualities and democratic attitude. It provides diversified opportunities to students in colleges and universities to develop their personality through community service.

NSS helps the student to grow individually and also as a group. It makes the students confident, develop leadership skills, and gain knowledge about different people from different walks of life. Students also learn other skills that help them lead a better life in various situations.

Sr.No.	Date	Activity	Nature of Activity and Students Participated/Benefited
1	5/6/2020	World Environment Day	Online Quiz Competition taken on the occasion of World Environment Day and 456 students participated in that quiz competition
1	12/1/2021	National Youth Day	Webinar on Teachings of Swami Vivekananda organized on the occasion of National Youth Day and Mr. P. M. Kulkarni delivered for the same. 60 students attended the webinar
1	12/1/2021	National Youth Day	Online Quiz Competition taken on the occasion of National Youth Day and 258 students participated in that quiz competition.
1	12/1/2021	National Youth Day	Displayed ideas and Teachings of Swami Vivekananda on the Notice Boards of all departments in the institute. All students benefited from these displays.
1	12/1/2021	National Youth Day	Shared the Ideas and Teachings of Swami Vivekananda through Social Media like whatsapp etc. All Students benefited from these quotes messages
1	26/01/2021	Republic Day	Flag hoisting ceremony organized on the occasion of Republic Day. Faculty members and 50 students attended the ceremony.
1	27/01/2021	Marathi Bhasha Samvardhan Pandharawada	Essay Competition organized and 37 students participated in the Competition. For all participants certificates provided. Winner was appreciated with certificate and prize cheque.
1	27/01/2021	Marathi Bhasha Samvardhan Pandharawada	Speech Competition organized and 5 students participated in the Competition. For all participants certificates provided. Winner was appreciated with certificate and prize cheque.

1. Online Quiz Competition taken on the occasion of World Environment Day and 456 students participated in that quiz competition.



**2. National Youth Day**

Webinar on Teachings of Swami Vivekananda organized on the occasion of National Youth Day and Mr. P. M. Kulkarni delivered for the same. 60 students attended the webinar.

Sharad Institute of Technology  
 College of Engineering, Yadav-Ichalkaranji

Webinar on  
**Teachings of Swami Vivekananda**  
 on the occasion of National Youth Day

**Mr. P. M. Kulkarni**

- Swadeshi
- Education
- Nationalism
- Self-Reliance
- National Service
- Nationalism
- Nationalism

Date: 12/01/2021  
 Time: 11 am - 12 pm

Google meet link:  
<https://meet.google.com/dmz-bdy-juc>

Note: This session will be in Marathi language.

Mr. V. S. Wadkar  
 NSS Officer

Dr. S. A. Khat  
 Principal

Shri. Anil Bagane  
 Executive Director



### 3. National Youth Day

Online Quiz Competition taken on the occasion of National Youth Day and 258 students participated in that quiz competition.



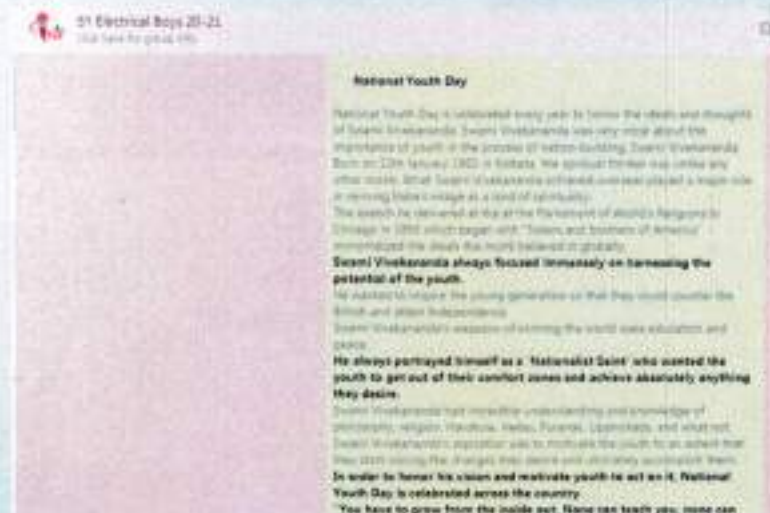
### 4. National Youth Day

Displayed files and Teachings of Swami Vivekananda on the Notice Boards of all departments in the institute. All Students benefited from these displays



### 5. National Youth Day

Shared the Ideas and Teachings of Swami Vivekananda through Social Media like whatsapp etc. All Students benefited from these quotes, messages.



### 6. Republic Day

Flag hosting ceremony organized on the occasion of Republic Day. Faculty members and 50 students attended the ceremony.



### 7. Marathi Bhasha Samvardhan Pandharawada

Essay Competition organized and 37 students participated in the Competition. For all participants certificates provided. Winner was appreciated with certificate and prize cheque.

### 8. Marathi Bhasha Samvardhan Pandharawada

Speech Competition organized and 5 students participated in the Competition. For all participants certificates provided. Winner was appreciated with certificate and prize cheque.



**Sharad Institute of Technology**  
**College of Engineering,**  
**Yadav-Ichalkaranji**



*Congratulations!*

मराठी भाषा संवर्धन पंधरवडा निमित्त आयोजित निबंधलेखन व वक्तृत्व स्पर्धेच्या विजेत्यांचे अभिनंदन!!

१) श्रेया देशभूषण तेरदाळे (SY ETC) - निबंध लेखन (महाराष्ट्राची संस्कृती) - प्रथम क्रमांक

२) साहिल अनिल साळुंखे (SY CIVIL) - वक्तृत्व स्पर्धा (स्वामी विवेकानंद) - प्रथम क्रमांक

## ISHRAE STUDENT CHAPTER COMMITTEE 2020-21



Mr. Avesahemad S. N. Husainy  
Faculty adviser & Student Chair ISHRAE KSSC



Mr. Shubham S. Kulkarni  
President



Mr. Rohit S. Dayma  
Vice-President



Ms. Asiya S. Pundhari  
Secretary



Mr. Suraj S. Haswal  
Treasurer



Mr. Sanket S. Bapat  
CWC



Mr. Abhishek K. Bhagate  
CWC



Mr. Abhishek S. Maske  
CWC

ISHRAE Kolhapur Sangli Sub-Chapter

## ISHRAE Industry Interaction



It was an huge knowledgeable interaction between Mr. Promod sir (Architecture) with our students regarding Green Building, Radiant cooling technology, Carbon footprint, Net zero energy building, Various national and international projects done by sir and NGO contribution, etc. The objective of this meet is to inculcate knowledge in the field of green building and motivation students towards societal

## ISHRAE Funded project confirmation

Project Title: Development of Low-Cost Radiant Cooling Technology for Classroom Cooling



## Winner of Global student design competition-2020 organized by ISHRAE

GLOBAL STUDENT  
POSTER DESIGN  
COMPETITION 2020

REFCOLD  
INDIA

**Controlled Atmospheric Chamber for Cold Chain Shipping Containers**  
 Shraddha S. Mahalik, Amrut B. Jadhav, Avesahemad S.N. Husairy,  
 Sharad Institute of Technology College of Engineering, Vadav, Ichalkaranji. (OBATU)

<p><b>INTRODUCTION</b></p> <p>India is one of the world's fastest growing economies and is the largest aviation market and is expected to be the world's third largest aviation market by 2025. The aviation industry is expected to grow at a CAGR of 10% over the next 10 years. The aviation industry is expected to grow at a CAGR of 10% over the next 10 years. The aviation industry is expected to grow at a CAGR of 10% over the next 10 years.</p>	<p><b>OBJECTIVES</b></p> <p>1. To design a controlled atmospheric chamber for cold chain shipping containers.</p> <p>2. To study the effect of radiant cooling technology on the temperature of the chamber.</p>	<p><b>POTENTIAL USERS</b></p> <p>1. Cold chain shipping containers.</p> <p>2. Cold chain shipping containers.</p>
<p><b>WORKING</b></p> <p>The chamber is designed to maintain a constant temperature of about 5°C. The chamber is designed to maintain a constant temperature of about 5°C. The chamber is designed to maintain a constant temperature of about 5°C.</p>	<p><b>FEATURES</b></p> <p>1. Radiant cooling technology.</p> <p>2. Low cost.</p>	<p><b>INSULATIVE MATERIALS</b></p> <p>1. Polyurethane foam.</p> <p>2. Glass wool.</p>
<p><b>SYSTEM OPERATION</b></p> <p>The chamber is designed to maintain a constant temperature of about 5°C. The chamber is designed to maintain a constant temperature of about 5°C. The chamber is designed to maintain a constant temperature of about 5°C.</p>	<p><b>CONCLUSION</b></p> <p>The chamber is designed to maintain a constant temperature of about 5°C. The chamber is designed to maintain a constant temperature of about 5°C. The chamber is designed to maintain a constant temperature of about 5°C.</p>	<p><b>REFERENCES</b></p> <p>1. [Reference 1]</p> <p>2. [Reference 2]</p>





## 1. Celebration of Earth Day:

**Project Title:** Development of Low-Cost Radiant Cooling Technology for Classroom Cooling

# ISHRAE

Kolhapur-Sangli Sub-chapter



# EARTH DAY CALIBRATION

## Student Talk on

1. LOW COST NATURAL COOLING CHAMBER FOR PRESERVATION OF FRUITS AND VEGITABLES

2. IOT BASED MONITORING SYSTEM FOR HOME QUARANTINE PERSON DURING COVID-19 PANDEMIC



Shubham Kulkarni  
Student, SITCOE, Yadav



Rohit Dayma  
Student, SITCOE, Yadav

22<sup>nd</sup> April 2020

1PM Onwards

Online through Zoom

Prof. R. H. Yadav  
President KSSC

Mr. K. H. Lalwani  
President Elect KSSC

Mr. A. A. Satavekar  
Secretary KSSC

Mr. Y. D. Gandhi  
Treasurer KSSC

Prof. A. S. N. Husainy  
Student Chair KSSC

Earth Day is an annual event celebrated around the world to demonstrate support for environmental protection. First celebrated in 1970, it now includes events coordinated globally by the Earth Day Network in more than 193 countries.

Earth Day 2020 is the 50th Anniversary of Earth Day. Celebrations included activities such as the Great Global CleanUp, Citizen Science, Advocacy, Education, and art. This year's theme for Earth Day 2020 was 'climate action'. Due to the COVID-19 pandemic, many of the planned activities were moved online.

## Industrial Visit

B.Tech (Final Year)

Subject - Mechatronics	
Title / Content Link	Link
Working Animation of Transducers and Capacitors	<a href="https://www.youtube.com/watch?v=zWYenHxi8uA">https://www.youtube.com/watch?v=zWYenHxi8uA</a>
Working of pick & place robot	<a href="https://youtu.be/6HNa2jhiapg">https://youtu.be/6HNa2jhiapg</a>
Modular axis- and gantry system	<a href="https://youtu.be/SifNHVvLYkw">https://youtu.be/SifNHVvLYkw</a>
Essae Steel Weigh Bridge -SSC-Global	<a href="https://youtu.be/tvWBgGiPlgY">https://youtu.be/tvWBgGiPlgY</a>
Smart Temperature Sensing	<a href="https://youtu.be/tX_EoS1Tedo">https://youtu.be/tX_EoS1Tedo</a>
Transmission line for Gear box production	<a href="https://www.youtube.com/watch?v=V8ppo7U4vPQ">https://www.youtube.com/watch?v=V8ppo7U4vPQ</a>

Subject -Refrigeration & Air Conditioning	
Title /Content	Link
Asia's Largest Dairy Plant	<a href="https://www.youtube.com/watch?v=2orEDQSTrYs">https://www.youtube.com/watch?v=2orEDQSTrYs</a>
Amul Food Factory	<a href="https://www.youtube.com/watch?v=h1Xp7p1taWo">https://www.youtube.com/watch?v=h1Xp7p1taWo</a>

Subject -Manufacturing Processes-III	
Title /Content	Link
ATC and APC	<a href="https://www.youtube.com/watch?v=HTqB3oY1RU5">https://www.youtube.com/watch?v=HTqB3oY1RU5</a>
3 D Printing	<a href="https://www.youtube.com/watch?v=cnlyYv_ItXo">https://www.youtube.com/watch?v=cnlyYv_ItXo</a>
Additive Manufacturing	<a href="https://www.youtube.com/watch?v=82ZZVII72yE">https://www.youtube.com/watch?v=82ZZVII72yE</a>

B.Tech (Third Year)

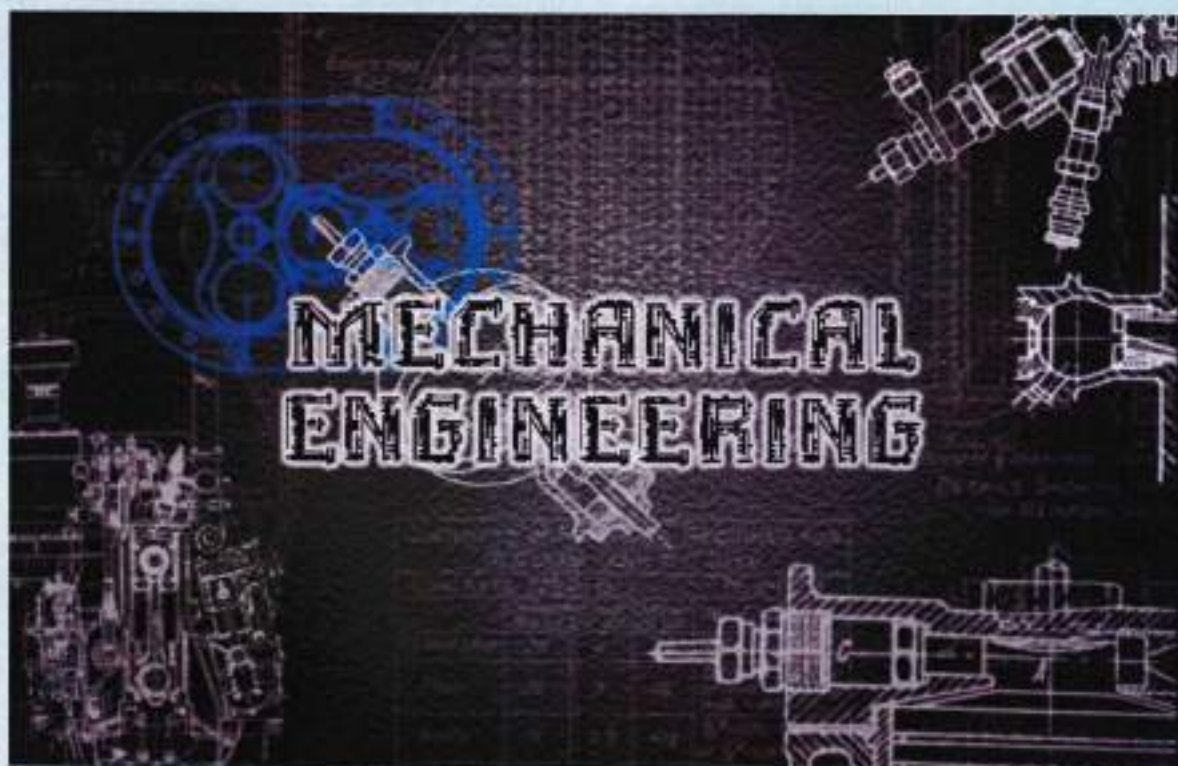
Subject -Applied Thermodynamics	
Title /Content	Link
Thermal Power Plant	<a href="https://www.youtube.com/watch?v=ldPTuwKEfmA&amp;t=2145">https://www.youtube.com/watch?v=ldPTuwKEfmA&amp;t=2145</a>
Combined Cycle Power Plant	<a href="https://www.youtube.com/watch?v=KVjtFXWe9Eo">https://www.youtube.com/watch?v=KVjtFXWe9Eo</a>

Subject -Theory of Machine -II	
Title / Content Link	Link
Gears	<a href="https://youtu.be/XZgsVoAZJjo">https://youtu.be/XZgsVoAZJjo</a>
Gears	<a href="https://youtu.be/J1UOjBLo-2M">https://youtu.be/J1UOjBLo-2M</a>
Gears	<a href="https://youtu.be/GE2MsturpJE">https://youtu.be/GE2MsturpJE</a>
Gears	<a href="https://youtu.be/7De17gyX2sU">https://youtu.be/7De17gyX2sU</a>
Gears	<a href="https://youtu.be/mhU8-jOt5qM">https://youtu.be/mhU8-jOt5qM</a>
Belt and rope drive	<a href="https://youtu.be/3UaFeNm_ZF8">https://youtu.be/3UaFeNm_ZF8</a>
Belt and rope drive	<a href="https://youtu.be/3pMx5hlgZbU">https://youtu.be/3pMx5hlgZbU</a>

B.Tech (Second Year)

Subject -Material Science & Metallurgy	
Title / Content Link	Link
Properties and grain structure	<a href="https://www.youtube.com/watch?v=uG35D_euM-o">https://www.youtube.com/watch?v=uG35D_euM-o</a>

Subject - Thermodynamics	
Title / Content Link	Link
Coal Fired Power Plant	<a href="https://www.youtube.com/watch?v=rEJKIUYjW1E&amp;feature=youtu.be">https://www.youtube.com/watch?v=rEJKIUYjW1E&amp;feature=youtu.be</a>
Nuclear Power Plant	<a href="https://www.youtube.com/watch?v=_AdA5d_8Hmo&amp;feature=youtu.be">https://www.youtube.com/watch?v=_AdA5d_8Hmo&amp;feature=youtu.be</a>
Steam Turbine Work	<a href="https://www.youtube.com/watch?v=SPg7hOxFtI">https://www.youtube.com/watch?v=SPg7hOxFtI</a>
Wind turbine	<a href="https://www.youtube.com/watch?v=qSWm_nprfqE">https://www.youtube.com/watch?v=qSWm_nprfqE</a>





Shri Shamrao Patil (Yadravkar) Educational & Charitable Trust's

# SHARAD INSTITUTE OF TECHNOLOGY, COLLEGE OF ENGINEERING

Yadrav (Ichalkaranji), Dist-Kolhapur (Maharashtra)

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**An Autonomous Institute**

Gat No. 525,473/A Behind Onkareshwar Temple Yadrav-Ichalkaranji, Tal-Shirol, Dist-Kolhapur, Maharashtra, India

Email : [contact@sitcoe.org.in](mailto:contact@sitcoe.org.in), Tel : +91-2322-252796, Fax : +91-2322-252897