

NEWSLETTER OF MECHANICAL ENGINEERING DEPARTMENT

Volume 9, issue 2, JAN 2020, Mechanical Engineering Department, GEC





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EVENTS and ACTIVITIES

2.5%		
1	July 08-12, 2019	GIAN ADVANCED COURSE
2	27 th July 2019	STUDENT'S PROJECT EXHIBITION 2018-19
3	02 nd August 2019 to 09 th August 2019	IIIE GRADUATE SHIP EXAMINATION
4	23 rd of September 2019	ISHRAE Chapter Installation and Guest Lecture
5	12 th October 2019	FIELD VISIT FOR THIRD-YEAR STUDENTS TO MRF
6	12 th October 2019	FIELD VISIT FOR THIRD YEAR STUDENTS TO M/S LIFT CONTROL Pvt Ltd
7	15 th October 2019	SIGNING OF MOUS WITH INDUSTRIES
8	19 th October 2019	FIELD VISIT FOR SECOND-YEAR STUDENTS TO RUTUTEK
9	19 th October 2019	FIELD VISIT FOR SECOND-YEAR STUDENTS TO GODREJ
10	17 December 2019	INVITED GUEST LECTURE

DEPARTMENTAL NEWS

- Prof. Milind Sakhardande attended a 1-week workshop on guidance, counseling, and mentoring skills from 24th to 28th June 2019 at the National Institute of Technical Teachers Training and Research Bhopal extension Centre, Porvorim
- **Prof. Milind Sakhardande** organized a 1-day workshop on python on 22nd June 2019 under the NMEICT project of IIT Bombay in the capacity of Remote Centre Coordinator
- Dr. Akshay Nigalye has been given charge of Workshop Superintendent since July 2016, Chairman of Furniture Purchase Committee, Member of Academic Committee, Chairman of Library Advisory Committee
- Prof. Harichandra Chandekar, Prof. Manohar Shankar Bhat, Prof. Gajesh Usgaonkar, Dr. Raghavendra D. Naik & Dr. Jagannath Hirkude, attended a 1-week course on Recent Trends in Automotive Technology from 16-20 December 2019 at the National Institute of Technical Teachers Training and Research Bhopal Extention Centre, Porvorim
- Dr. Jagannath Hirkude, attended the 19th CII-NID India Design Summit 2019 Hosted by CII Design and Confederation of Indian Industry in Hotel Cidade de Goa, Panaji from 20-21 September 2019.
- Dr. Jagannath Hirkude attended the NBA accreditation program organized by the National Institute of Technical Teachers Training and Research Bhopal Goa Centre from 25th to 27th Nov 2019, Goa 6, at Goa College of Engineering campus.
- **Dr. Jagannath Hirkude** attended An IPR Session on patent search was conducted by the Goa state innovation council on 24th Sept 2019 at Goa College of Engineering, Farmagudi.
- Prof. Harichandra Chandekar attended a course on NBA Accreditation from 25/11/2019 to 27/11/2019 conducted by the National Institute of Technical Teachers Training and Research, Bhopal at Goa College of Engineering, Farmagudi, Goa.

- Prof. Harichandra Chandekar, credited online course on "LaTeX101x: LaTeX for Students, Engineers, and Scientists conducted from 24 September 2019 to 2 December 2019 by Indian Institute of Technology, Bombay.
- Dr. Mahesh Dhavalikar attended a 1-week course on Emotional Intelligence in Teaching from 10-14 June 2019 at the National Institute of Technical Teachers Training and Research Bhopal Extention Centre, Porvorim

PAPERS PRESENTED/ PUBLISHED

- Dr. Jagannath Hirkude, published a paper titled "Influence of antioxidant on the performance of CI engine using waste fried oil methyl ester" in IOP Conf. Series: Materials Science and Engineering, 594 (2019) 012039, Scopus Indexed Journal
- Mr. Sawan Naik and Dr. Suraj Rane presented a paper at the 5th International Conference on Industrial Engineering (ICIE 2019), held at SVNIT, Surat during Dec. 12-14, 2019. The paper was titled 'Firefly based optimization of multi-stage facility layout in assembly shop'.





Dr. SURAJ RANE ATTENDED GIAN ADVANCED COURSE ON RELIABILITY BASED ROBUST PRODUCT DESIGN

Participated in five days GIAN Program on 'An Advanced Course on Reliability-based Robust Product Design' at MNIT Jaipur from July 08-12, 2019. The international expert for the program was Prof. O. P. Yadav, Mechanical Engineering Department, North Dakota State University



IIIE GRADUATE SHIP EXAMINATION - AUGUST 2019

IIIE Graduate Ship Examination was conducted by IIIE, Goa Chapter at GEC from 02nd August 2019 to 09th August 2019. In total 05 candidates answered Preliminary, 12 answered Section-A and 06 answered Section-B of the exam. All the candidates who answered the exam were from the Industry. The exam was conducted for 36 subjects, spread over eight sessions, with each session being of a three-hour duration. The timing for the sessions was in the evening from 6 PM to 9 PM on working days and Sunday it was in the morning from 10 AM to 1 PM. Prof. Surai Marathe, Assistant Professor in Mechanical Engineering Department from Don Bosco College of Engineering was the Chief Exam Superintendent for this exam, assisted by Mr. Manjunath Alve, Don Bosco College of Engineering, Mechanical Department. The examination was conducted smoothly under the guidance of Prof. Gajesh Usgaonkar, Associate Professor in Mechanical Engineering Department, Dr. Mahesh Dhavalikar, Associate Professor in Mechanical Engineering Department, and Chairman IIIE, Goa Chapter, and Dr. Vinay Shirodkar, Head of Mechanical Engineering Department. Many IIIE members from the Institute and Industry took active participation in the smooth conduct of the exam and were also involved in invigilation work. The candidates answering the exam expressed their gratitude towards the authorities of IIIE, Goa Chapter, GEC, and the Principal, GEC for having the center in the college, which was very convenient for them, or else they were forced to apply for 15 days leave and go to Pune or Bangalore for answering the exam.



FIELD VISIT FOR SECOND YEAR STUDENTS TO GODREJ

The Mechanical Department of Goa College of Engineering organized a field trip to Godrej Factory at Madkai, Goa. The objective of the trip was to get firsthand knowledge of the actual working and setup of various processes of a factory since the actual on the field working experience at the factory site cannot be obtained from a textbook.

We arrived at the factory, at 10.00 a.m., and were escorted to a lecture hall by the manager of the factory. He gave us an introduction of the various parameters involved in the working of this factory in which locks and keys are manufactured. The manager gave us a guided tour through the factory explaining all the manufacturing processes of locks and keys. After exploring the factory and based on the details given by the host, the following key points were listed as below:

Raw Material Storage

Raw materials, which are imported, are inspected and kept ready to be sent for further processing.

CNC Plant

Keys and pins are manufactured by a CNC machine. After manufacturing them, they are quality checked under a sonography machine, then are given a unique code and the Godrej logo printed by laser marking.

Turing Plant

Here the body of the locks is cut to a specific length and then specified holes are drilled into the body by a BMC machine. These bodies are put into a Jig machine to smooth out sharp edges.

Press Shop

Here the body for home door locks is manufactured by hydraulic press.

Keys and lock bodies after processing are given an acetone bath to give it a shine. They are then electroplated to protect them from rusting

Assembly Plant

The locks and keys are finally brought to the assembly plant where they are given a final quality check and packed for shipping

Engineering Office

Before the locks are manufactured they are designed and then sent for prototyping

It can be concluded that the trip was successful and we believed that our objective was achieved.





FIELD VISIT FOR SECOND YEAR STUDENTS TO RUTUTEK

Rututek Enterprise is mainly a sheet metal and component fabrication Industry. It deals with sheet metal bending, cutting, punching, and welding operations. They also worked on small-scale fabrication using pipes and tubes. The parts are manufactured with tolerances in microns using sophisticated equipment such as a CNC bending machine, CNC laser cutting machine, etc. It was observed that they generally used TIG (Tungsten inert gas welding) and MIG (Metal inert gas welding) as they give better results compared to SMAW (Shielded metal arc welding) in terms of weld strength and also it is possible to weld thin metal sheets with TIG. Later the students were taken to the finishing section where they were able to see the surface finishing, plating, and powder coating processes.



FIELD VISIT FOR THIRD YEAR STUDENTS TO MRF

A field visit to M/s MRF Ltd., Usgaon was planned for T.E.Mechanical students on 12th October 2019. A total of 70 students accompanied along with 3 faculty members of the Mechanical Engineering Department, Shri Harichandra Chandekar, Shri Malikarjun Padashetti, and Shri Basavraj Olekar in 2 college buses.

Upon reaching MRF Limited-Unit II in Usgaon, the students were given a seminar on the terminology associated with tires and the manufacturing process used in the plant. A video showcasing the brief history of the company MRF Limited and the safety procedures to follow during the visit were shown.

The students were then split into three groups, led by the industry personnel leading each group to the factory premises.

The students visited each station and witnessed with great detail every step, each and every machine and technique used to manufacture tires. The groups then gathered back at the seminar hall where they were greeted by an ex-Engico, Mr.Dinesh Virgincar-Sr.Production manager. He inspired the students to do well in their careers and gave a small talk on how studies are important.

The students could witness the entire tire-making production and had a rich learning experience.



FIELD VISIT FOR THIRD YEAR STUDENTS TO M/S LIFT CONTROL PVT LTD

A field visit to M/s Lift Control Pvt Ltd, Khandepar, Ponda was planned for T.E.Mechanical students on 12th October 2019 in the afternoon session. A total of 70 students were accompanied along with 3 faculty members of the Mechanical Engineering Department, Shri Harichandra Chandekar, Shri Malikarjun Padashetti, and Shri Basavraj Olekar.

The students were split into three batches for better accessibility to the plant. Mr. Amrut Bhate-Production Engineer of the company explained the various operations carried out on the sheet metal to make final products used in various electrical and automation panels. The students were shown the entire sequence in which the panels were prepared. The students saw the bending and punching operations carried out on Amada make machines and cutting operations carried out on Turret CNC machine followed by Britt Pneumatic Power press which was used to insert assemblies like nuts. Sheet metal after the above operations were welded. Finally, after the sheet metal operations, the product was sent to a different section where the final finish was given through powder coating to obtain the customer desired finish.



STUDENT'S PROJECT EXHIBITION 2018-19

The final year Mechanical Engineering Students Project Exhibition was organized on 27th July 2019 at the Mechanical Department block of Goa College of Engineering. The exhibition was inaugurated by the Honourable Chief Minister of Goa Dr. Pramod Sawant. Other dignitaries present were Honourable Minister of Goa Government Shree Govind Gawade, Secretary Education Mrs. Neela Mohanan, Director of Technical Education Dr. Vivek Kamat, Principal Dr. Kripashankar M. S., and Head of the Department Dr. Vinay Shirodkar. This event was coordinated by Dr. Jagannath Hirkude, the project in-charge and Associate Professor in the Department of Mechanical Engineering. Following projects were displayed with posters during the exhibition

- 1. Fixed Wing Unmanned Aerial Vehicle for Surveillance
- 2. Automated Lawn Cutter and Sprinkler System
- 3. Automated Floor Cleaner
- 4. Strategic Planning and Scheduling of the Construction of Multipurpose Cargo Vessel at Chowgule Shipyard
- 5. Using Industrial Waste Byproducts Towards a Greener Initiative
- 6. A CNC plotter for pattern development
- 7. Implementation of Lean Concepts at CGP ISL Commercial Motors Goa.
- 8. Pneumatic Paper and Leaf Plate Press
- 9. Omnidirectional Industrial Robot with Gripper Module
- 10. Remotely Controlled Automatic Seed Sowing Machine
- 11. Banana Pseudostem Fibre Extraction Machine
- 12. Automated Bike Washing Machine
- 13.T-shirt Folding Machine
- 14. Robotic Arm Control using Machine Learning
- 15. Automated Food Serving System
- 16.Design and Prototyping of Portable CNC Plate Metal Cutting Machine
- 17. Control and Analysis of Differential Pressure Propulsion System
- 18.Smart Helmet for Motorbike
- 19. Solar Powered Evaporative Air Cooler



ISHRAE Chapter Installation and Guest Lecture (2019-20)

The 23rd of September 2019 saw the student council installation & inaugural function for ISHRAE (The Indian Society of Heat and Air-conditioning Engineers) Goa chapter.

The Chief Guest for the function was Mr. Santosh Naik, President of ISHRAE Goa chapter, the Guest of Honour was Mr. Milind Sardessai, CWC member ISHRAE Goa chapter, and the resource person for the day was Mr. Balkrishna Madhusudhan Chodankar, lecturer in the mechanical engineering department at Govt. Polytechnic Bicholim. The principal of GEC Dr. Krupashankara MS, HOD of Mechanical Engineering Department GEC, Dr. Vinay Shirodkar, Associate Professor of Mechanical Department Dr. Jagannath Hirkude accompanied the guests on the dais.

The function began with the lighting of the traditional lamp. The HOD of the mechanical department Dr. Vinay Shirodkar addressed the gathering followed by Professor Dr. Jagannath Hirkude welcoming the members on the dais. The principal Dr. Krupashankara MS spoke on the occasion about the various possibilities that the ISHRAE Goa chapter has provided so far for the engineers.

The chief guest Mr. Santosh Naik being an ex-Engineer at the Indian Navy shared his vast valuable experience with the audience as well as the bright opportunities and the scope the chapter will provide and has provided for the engineers interested in the thermal aspect of engineering. Mr. Milind Sardessai CWC member of the ISHRAE Goa chapter enlightened the audience with his wise words.

The new council members for ISHRAE Student Chapter GEC 2019-2020 were sworn in with Mast. Ish Kumar Jha as the President, Miss. Ankita Tiwari as the Secretary, Mast. Prajwal Tubki Dessai as the Treasurer, Mast. Aaditya Kamath, Mast. Bhavik Pagi Mirashi, Mast. Tushar Verlekar and Mast. Mahesh Naik, as the Co-Working-Committee member of the ISHRAE Student Council GEC 2019-2020.

The inaugural function concluded with Mast. Manjallore Cherian George, Student of Mechanical Department GEC, proposed the vote of thanks, followed by an informative lecture on 'Refrigerants and their developments' by the resource person of the day Mr. Balakrishna Chodankar. The lecture concluded with a question hour.





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INVITED GUEST LECTURE

Dr. Jagannath Hirkude, Associate Professor offered an invited talk on Biofuels, Optimisation of Engine Operating Parameters and Energy Auditing at AICTE sponsored STTP on "Advancement in I.C. Engine and Vehicle System" on 17 December 2019 at AGTI's Dr. Daulatarao Aher College of Engineering, Karad, Maharashtra



SIGNING OF MOUS WITH INDUSTRIES

A function was held at Taleigao Community Centre, Taleigao on 15th October 2019 in the distinguished presence of the honourable Chief Minister of Goa, Dr. Pramod Sawant. Over 100 MOUs were signed between various Engineering Colleges in Goa and Industries in and outside Goa.

Principal, Goa College of Engineering Dr. Krupashankara M.S. signed MOUs with over 50 industries. Following are the details of industries with whom MOUs were signed through the Mechanical Engineering department.

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Sr. No.	Name of the Company	Official from the industry	Designation
1	Astra Metal systems ltd.	Mr. Satish Shinde	Managing Director
2	M/s Aerocoach	Mr. Edward Monteiro	Managing Partner
3	Dhavalikar Automobiles	Mr. Amol Dhavalikar	Managing Partner
4	Rututek	Mr. Charlton Colaco	CEO
5	QuEST Global Engineering Services Pvt.Ltd.	Mr. Sandesh Shirodker	Delivery Unit Head
6	Deccan Fine Chemuicals Pvt. Ltd.	Mr. Kiran Desai	Vice President and plant Head

STUDENTS DEPUTED FOR INTERNSHIP IN Dec 2019

SN	NAME	COMPANY	START	END	DURATION
1	Shivam Naik	Muktar Automobiles Pvt. Ltd.	18-12-2019	04-01-2020	14
3	Joaldrin Ronicio Melo	Muktar Automobiles Pvt. Ltd.	18-12-2019	04-01-2020	14
4	Basavraj Kani	Muktar Automobiles Pvt. Ltd.	18-12-2019	04-01-2020	14
5	Suhedh Shirodkar	Goa Instruments Industries Pvt. Ltd.,	18-12-2019	04-01-2020	14
7	Jayesh Gandhi,	Volkswagen Mody Autocorp Pvt. Ltd.	18-12-2019	04-01-2020	14
8	Ajay Gunjikar	Volkswagen Mody Autocorp Pvt. Ltd.	18-12-2019	04-01-2020	14
9	Letscio Fernandes	Deccan Fine Chemicals (India) Pvt. Ltd.	18-12-2019	04-01-2020	14
10	Prajwal Tubki	Dhavlikar Automobiles	150-4-3-	ALL S	
·	Dessai		02-01-2020	18-01-2020	15
11	Ugam Sawant	Crompton Greaves Consumer		17 01 0000	Sec il sis
10		Electrials Pvt Ltd	02-01-2020	17-01-2020	14
12	Yuvraj Sawant	Crompton Greaves Consumer	A. 6-7	Stan State A	and the second
		Electriais PVL Ltd	02-01-2020	17-01-2020	14
13	Vaihhay Kamhli	Crompton Greaves Consumer	02 01 2020	17 01 2020	
10		Electrials Pvt Ltd	02-01-2020	17-01-2020	14
14	Saheel Halarnekar	Crompton Greaves Consumer			Conference of
1	AP - AL	Electrials Pvt Ltd	02-01-2020	17-01-2020	14
15	Niket Shetkar	Nestle India Ltd			
	and the second second		02-01-2020	17-01-2020	14
16	Saish D. Haldankar	Vedanta Limited	02-01-2020	18-01-2020	15
17	Blasio Gonsalves	Vedanta Limited	02-01-2020	18-01-2020	15
18	Aldrige Diogo Luis	Vedanta Limited	02-01-2020	18-01-2020	15
20	Deepak Bhanushali	Zuari Agro Chemicals Ltd	02-01-2020	18-01-2020	15
21	Mahesha H. Gonal	Zuari Agro Chemicals Ltd	02-01-2020	18-01-2020	15
22	Saish Naik	Zuari Agro Chemicals Ltd	02-01-2020	18-01-2020	15
23	Shubhankar	ACGL unit 2			
	Mulgaonkar		03-01-2020	18-01-2020	14
24	Deenar Gulelkar	ACGL unit 2	03-01-2020	18-01-2020	14
26	Akshay Gaonkar	ACGL unit 2	03-01-2020	18-01-2020	14

B.E (MECH) PROJECTS ACADEMIC YEAR: 2018-19

1257	ROLL NO	NAME	TITLE	GUIDE	
1	151102031	MAYENKAR JAYESH	Contrainer a section of the section of the	States - States	
1 Part	151102009	DIUKAR ROHIT SUNIL	Fixed Wing Unmanned Aerial Vehicle	Dr. Raghavendra Naik	
1	151102047	PHADTE AKASH AUDUMBER	for Surveillance		
2. 22	151102040	NAIK ROHIT CHANDRAKANT			
1250		230/2700 21000 2			
- 322	151102048	POWAR SAIESH RAJENDRA	and the second second		
- She	151102021	HOBLE PRATIK PRASAD	The Star Star Providence	a start and	
2	151102039	NAIK RAGHUVIR	Automated Lawn Cutter and Sprinkler	Gajesh Usgaonkar	
S.A.		MAHANAND	System		
i stat	151102032	MOHAMMED SALIF SAYED			
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3	151102063		Automated Floor Cleaner	Dr. Jagannath Hirkude	
	141102058				
and the	151102001	ALVANI VIGHNESH VINOD			
C.C.	151102041	NAIK SHREYAS GANGARAM			
	151100010	001/1001/101			
1	151102019		and the second second	The second	
4	151102038	NAIK PRAJAKT PRAMOD	Designing, Modeling and Analysis of a	B. R. Kulkarni	
4	151102056	SAWANT JAYESH JANARDAN	Steel Pressure Vessel		
125-	131102064	VICKY GURUDAS PEDNEKAR	and the second second	a second a second	
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140	161202009	SAINATH VASUDEV SAMANT			
199	141102062	VELGUENKAR SHRINATH	Strategic Planning and Scheduling of	A CALLER AND A	
5	141102064	VIEGAS GAYLON CAVIN	the Construction of Multipurpose	Dr. Shridhar Mhalsekar	
1 Stat	141102015	GAONKAR PRASANNA	Cargo Vessel at Chowgule Shipyard		
	Contraction of the	KUSHALI	The same of the same	State State	
2 12		Richard Victor 1981	and the second second		
1250	151102071	SHENDURE SAMPADA			
. The	151102072	SIRVOICAR SOHAN RAJ	Using Industrial Waste Byproducts	Milind Sakhardande	
6	151102067	NAIK SHASHANK PRAVIN	Towards a Greener Initiative		
- Sec	151102068	PADIYAR NEELABH			
1000		GOVINDRAJ			
-	151102064	VENGLIRI EKAR SAL EKNATH			
	151102004		Hand Alexandre Barrande	10001 (ERE)	
7	151102030		A CNC plotter for pattern development	Mahesh Caisukar	
	131102020	VASUDEV	in one plotter for pattern development		
	151102043	NAVELKAR SARANG		I Standard I	
8	161202008	PRABHU VELGUENKAR	Implementation of Lean Concepts at	Dr. Mahash Di	
	161202006	PARAB AKASH SUNIL	CGP ISL Commercial Motors Goa.	Dr. Wanesh Dhawalikar	

T.S.	161202011	SINARI VISHAL VASANT		A. S. S. P. S. M.
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0	151102006	CHAUDHARI PRASHANT	Desumatic Danar and Loof Dista Dross	Dr. Vinay Shirodkar
9	10000	KISHAN	Pheumatic Paper and Lear Plate Press	Dr. Vinay Shiroukar
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120	151102017	GAURAV THAKUR		
-34	131102067	MARGE MAHESHKUMAR	Omnidirectional Industrial Robot with	Gajesh Usgaonkar
10	141102022	KALEKAR NIPUN SANJAY	Gripper Module	
100	151102025	KASKAR KRUPESH	CENTER MERINE	NIGHLARE EN
1	A Contra	SHIVANAND		Provide a state of the
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5	151102008	DHARWADKAR AKASH	Part and the second second	NO I CAN
1 8	151102013	GANDHI AKSHAY	Remotely Controlled Automatic Seed	
11	151102018	GOUDAR AMBRESH	Sowing Machine	Harichndra Chandekar
1	151102065			
	131102063		The state of the state of	
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1180	161202004	MACGYVIR CUSTODIO	Banana Pseudostem Eibre Extraction	the server set
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2 19	161202012	SUTAR NISSAR AHAMMAD		
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13	151102035	NAGVEKAR AMEY VINAYAK	Automated Bike Washing Machine	Dr. Akshay Nigalye
1	151102070	RANE NILESH DIWAN		atter and the second
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14	151102051	REBELLO ALLAN DICKSON	T-shirt Folding Machine	Dr. Raghavendra Naik
120	151102052	REVANKAR MANISH VINOD		
1-34	151102054	SADHLE SARVESH SURESH		a state and
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150	141102013	CHOLERA	Pohotic Arm Control using Mashing	the state with
15	10-0011-57	DEVANSHNASHISH	Learning	Bhat Manohar Shankar
1	151102011	D'SA KEEGAN ANTHONY	Learning	State of the second second
1	151102015	GAONKAR SHUBHAM P	State State State	10 10 12 state
1	122			T SAFE SHERE
	151102033	MORAJKAR MANTHAJ		
16	151102012		Automated Food Serving System	Dr. Akshav Nigalve
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16.0	151102002	AMRE ROUNAK RAMMUIRTI		

Tak.	151102057	SHINDE SIDDHARTH SHRAD		
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17	151102010	D'MELLO GAVIN LUIS	The Star Start The Start	and the state
	151102069	PRABHU DESAI		Dr. Suraj Rane
	N. Galling	DESHPRABHU AMEY	Design and Prototyping of Portable	
	151102049		CNC Plate Metal Cutting Machine	RA CONSTRUCT
	151102043		Harden Adda Terrade	1.10 P. P. P. P.
1 30	101102002			- 10 20 40
Contra la	161202002	KARAPURKAR SUMEET	Station in the station	
	15 Carlos	UMESH		188 along The
10	161202007	PATIL RAHUL BABASAHEB	Control and Analysis of Differential	Phot Monobor Chanker
10	161202010	SHETKAR SARTHAK	Pressure Propulsion System	Briat Manonar Shankar
		VASUDEV	Sanka Arsang Starke	
	161202003	LOLYEKAR NIKHIL NARESH		All and a state of the
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19	151102066		Smart Helmet for Motorbike Ma	Mahesh Caisucar
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	141102023	KARAPURKAR DEEPEN		atter and the second
1	141102042	PHADTE RUSHAB ROHIDAS	Enhancement of Tourism Supply Chain	Contraction of the second
20	141102016	GAUDE BORKAR HARSHAD	Drivers in Goa	Dr. Shridhar Mhalsekar
S. P	121102005	PRABHAKAR	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	11 75 37
1200	121102005	RUGER BARRETU		
-	151102007			
1	151102007			
21	151102024	IOSHI POORNAPRAGYA	Solar Powered Evaporative Air Cooler	Dr. Jagannath Hirkude
	151102023	BARVE SAURABH KIRAN		States & Chickey
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3. E	151102029	KUNKOLIENKAR PARTH	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
1250	151102030	MADKAIKAR SHARMAD	Remote Pump Monitoring System at NETZSCH Mahesh Caisucar	
22	151102024	SANJIV		
13/4	151102034			
	151102044	NAIK SIDDHANT VINAYAK		

INSTITUTE VISION

A TECHNICAL INSTITUTE WITH A FOCUS ON EXCELLENCE IN ACADEMICS, RESEARCH, INDUSTRY COLLABORATION AND NURTURING HUMAN VALUES IN STUDENTS

INSTITUTE MISSION

- FORMULATE & IMPLEMENT CURRICULUM THAT ENSURES HIGH ACADEMIC STANDARDS
- PROVIDE INFRASTRUCTURE THAT MEETS ACADEMIC AND ADVANCED RESEARCH REQUIREMENTS.
- COLLABORATE WITH NATIONAL, INTERNATIONAL INSTITUTIONS, LABORATORIES AND INDUSTRIES THROUGH STUDENT AND FACULTY EXCHANGE PROGRAMS AND INTERNSHIPS.
- UNDERTAKE CONSULTANCY PROJECTS THAT ARE RELEVANT TO THE STATE & NATION.
- IMPART HUMAN VALUES, AWARENESS OF ENVIRONMENT AND SUSTAINABLE SOLUTIONS IN STUDENTS AND FACULTY.
- NURTURE INNOVATION, ENTREPRENEURSHIP, LEADERSHIP AND RESOURCE MANAGEMENT
 SKILLS

DEPARTMENT VISION

IMPART HIGH QUALITY KNOWLEDGE & SKILLS TO STUDENTS IN THE FIELD OF MECHANICAL ENGINEERING, ENCOURAGE RESEARCH, INDUSTRY BASED PROJECTS LEADING TO CONSULTANCY & NURTURE HUMAN VALUES AND LIFE SKILLS

DEPARTMENT MISSION

M1: IMPART KNOWLEDGE AND SKILL BASED TRAINING IN MECHANICAL ENGINEERING AND ALLIED FIELDS

M2: PROMOTE RESEARCH AND INDUSTRY BASED PROJECTS

M3: INCULCATE LEADERSHIP QUALITIES, HUMAN VALUES, CONCERN FOR ENVIRONMENT AND SOCIETY

M4: NURTURE INNOVATION, ENTREPRENEURSHIP AND RESOURCE MANAGEMENT SKILLS

PROGRAM EDUCATIONAL OBJECTIVES

PEO 1 IMPART KNOWLEDGE, PROBLEM SOLVING SKILLS, USAGE OF MODERN TOOLS RELATED TO MECHANICAL ENGINEERING AND ALLIED FIELDS

PEO 2 ENCOURAGE TEAM WORK AMONG STUDENTS IN SOLVING COMPLEX PROBLEMS, DESIGN OF COMPONENTS AND SYSTEMS.

PEO 3 NURTURE HUMAN VALUES, CONCERN FOR ENVIRONMENT AND SOCIETY IN THE STUDENTS

PEO 4 INCULCATE PROJECT MANAGEMENT, COMMUNICATION AND LIFE SKILLS IN THE STUDENTS

PROGRAM OUTCOMES

PO 1: Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

PO 2: Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and Engineering sciences.

PO 3: Design/Development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO 4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO 5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO 6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO 7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO 8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO 9: Individual and team work: Function effectively as an individual and as a member or leader in diverse teams, and in multidisciplinary settings.

PO 10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO 11: Project management and finance: Demonstrate knowledge and understanding of the engineering management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO 12: Life-long learning: Recognize the need for and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES

PSO 1: Students must be able to apply principles of mechanical engineering, basic science and mathematics to model, analyze, design and realize physical systems and processes.

PSO 2: Students must be able to work professionally in interdisciplinary teams, communicate effectively, and demonstrate time & resource management skills, with knowledge of legal and ethical practices.



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