SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

(Established under Section 3 of the UGC Act, 1956) | Re-accredited by NAAC with 'A++' grade | Awarded Category – I by UGC

GEARHEADS' GAZETTE

Department of Mechanical Engineering, SIT, Pune.

Magazine 2023-24

From the H.O.D's Desk

COLONEL (DR)
ANAND PANDEY

PROFESSOR AND HEAD,
MECHANICAL ENGINEERING DEPARTMENT

Vision

The Department of Mechanical Engineering envisions to be recognized as a leader in offering a value-based education by disseminating knowledge, skills, and empowering students for better career opportunities.

Mission

1. To promote value-based education in Mechanical Engineering by facilitating professional ethics & experiential learning for better employability.

2. To encourage students to excel in research, innovation & entrepreneurship skills for addressing societal needs.

3. To enhance students' skills by promoting industrial & international collaborations to foster global competencies.

Mechanical Engineering Department has more than twenty highly qualified teaching faculty with specializations in Design, Thermal, Manufacturing and CAD/CAM.

Their research areas include computational fluid dynamics, e-mobility, industry 4.0, 3D printing, advanced composite materials, optimization, lean manufacturing, HVAC systems and more.

The department has fully equipped laboratories like I.C. Engines lab, Strength of Materials lab, Theory of Machines lab, CAD lab, Refrigeration / Air Conditioning lab, Heat Transfer lab, Automobile Engineering lab, workshop and others.

Vision and Mission

Trending this Semester...

- Collaboration with ARAI
- Visit to ACREX India
- Mega Launch of SIT Mechanical ISHRAE Pune Chapter

Vision of the Department

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Program Educational Objectives

1. Apply the fundamental knowledge & skills of Mechanical Engineering to analyse and solve real-world technical problems along with international significance.
2. Demonstrate creative, critical, and design thinking abilities by solving research problems in mechanical engineering of social relevance.
3. Communicate effectively and work as a team in multi-disciplinary domains with an entrepreneurial attitude and leadership qualities.

Industrial Connect

Department of Mechanical Engineering

The Department of Mechanical Engineering SIT Pune at SIT- Symbiosis Institute of Technology is extremely happy to launch M.Tech in Automotive Engineering in collaboration with ARAI.

Symbiosis Institute of Technology, Pune hosted a ProTech23 event on 29th April, and we are thrilled to announce that the event featured a special guest, Mr. Vaidya who shared his valuable knowledge and experience with the attendees. The Protech included various interactive project, and poster competitions designed to engage and challenge the participants. We would like to thank all the participants, sponsors, nd organizers for making this event a huge ess. Posting the winning team TSSM'S ai Sawant POLYTECHNIC NARHE ct of Hybrid Bike.

Industrial Connect

Department of Mechanical Engineering

We are happy to share the glimpses of the visit of delegation of Vice Chancellors of Universities of Uttar Pradesh on 1st February to Symbiosis Institute Of Technology Pune.

The delegates were quite impressed by the work done by Faculties, staff and Students.

The Department of Mechanical Engineering at SIT conducted a visit to ACREX India 2023 for second and third year students on 16 March, 2023.

In the 22nd edition of ACREX INDIA the focus was on advancements in technology in the HVAC sector and engineering towards net zero. With participation of over 40 countries, it was South Asia's largest exhibition on air conditioning, heating, ventilation and intelligent buildings.

The students got a wonderful opportunity to interact with industry professionals and also got to see the live demonstration of various HVAC systems.

INDUSTRIAL VISITS

BRIDGING THEORY AND REALITY

FINAL YEAR STUDENTS GOT A CHANCE TO VISIT SPIROTECH HEAT EXCHANGERS PVT. LTD. AND UNDERSTAND THE MANUFACTURING PROCESS INVOLVED IN DIFFERENT TYPES OF HEAT EXCHANGERS.

SECOND YEAR STUDENTS OF SIT MECHANICAL ENGINEERING DEPARTMENT WITNESSED BOILER MANUFACTURING AND ASSEMBLY AT SILSON BOILERS WITH MAHAVAS PRECISION CONTROLS.

Events

Department of Mechanical Engineering

Department of Mechanical Engineering, Symbiosis Institute of Technology, Pune is organizied a free summer camp on advances in mechanical engineering in which, we covered very interesting topics like Additive manufacturing, Applications of IOT in Mechanical Engineering, and Hands-on Sessions on EV battery,

Memories were cherished by our passing out 2019-23 batch B.Tech. and 2021-23 M.Tech students at Symbiosis Institute Of Technology Pune on Farewell.

We are glad to share the glimpses of some mesmerizing performances by our students during the event.

Achievement- ISHRAE Pune Chapter

Department of Mechanical Engineering

Professional Chapters have been an instrument of change and contributed largely to making engineering students industry ready!

The formal launch of SIT Mechanical Engineering Department's Indian Society of Heating Refrigerating and Air Conditioning Engineers (ISHRAE) was held on 11th Feb 2023 at Institute Auditorium, Pimpri Chinchwad College of Engineering.

Prof. Dr. Anirban Sur was felicitated as ISHRAE Symbiosis Chapter faculty advisor.

Following students took oath as office bearers.:

Treasurer - Tejas Shirgaonkar (Final year)

Secretary - Raunak Sharma (Third Year)

Treasurer - Yash Chawan (Third Year)

CWC Representative - Prem Pandit (Third Year)

Students' Achievement

Department of Mechanical Engineering

At Symbiosis Institute of Technology, final year undergraduates undergo a mandatory 6-month industrial internship to make students "Industry Ready".
We are happy to announce the bounty of Industrial Internship offers received by final year students of Mechanical Engineering Department.

- **Arnav Sharma**

2nd Growth | Product Strategy | Author | Winner - Case consulting @Harvard Business School; Winner @Intelliswift Hackathon.Growth | Product Strategy | Author | Winner - Case consulting @Harvard Business School; Winner @Intelliswift Hackathon 1W

- **Raunak Sharma**

1st degree connection 1st
...dent at SIT- Symbiosis
...e of Technology

- **...mmanwar**

...ign Engineer- GET –

We are thrilled to welcome our newest cohort of Graduate Engineer Trainees (GETs) to Kohler's India Technical Center (ITC) and Pune IT offices. 'Katerpillar,' our signature GET induction program, has equipped them to understand and immerse themselves in the Kohler culture.

Students' Achievement

Department of Mechanical Engineering

Mechanical Engineering Department is proud to share that our department students were instrumental in winning FLAME University Football Tournament by defeating National Defense Academy in the Finals!!

Fourth Year Mechanical
1) Prathamesh Shinde
2) Manas Thaker

Third Year Mechanical
1)Karmrajsinhji Raulji
2)Haggai Moses

Second Year Mechanical
1) Pritish Babar
2) Satvik Nayak
3) Archas Rana
4) Aditya Patil

Faculty's Achievement

Department of Mechanical Engineering

- **Dr Anindita Roy**

Faculty of Mechanical Engineering Department at SIT shares her experience as,

"It was wonderful to share my views on the 6-year-long association with La Fondation Dassault Systems on the occasion of their 6th-anniversary celebration with 200+ associates all over India. It was great to learn about the phenomenal growth of La Fondation which has touched and transformed engineering colleges, startups and schools. I was fortunate to receive support for my first project from them and the association continues.. Thanks to all the wonderful people at Dassault Systems Fondation India."

ANTARIKSH - SPACE AND ASTRONOMY CLUB

THE SPACE AND ASTRONOMY CLUB, WAS FOUNDED OM SATURDAY, 26ST OF JANUARY, 2023 WITH THE AIM OF UNCOVERING THE MYSTERIES OF THE COSMOS; BY ENGAGING THE STUDENTS IN ACTIVITIES THAT WILL HELP THEM LEARN ABOUT THE AMAZING PHENOMENONS OF OUR UNIVERSE.

SPACE & ASTRONOMY CLUB, SIT SUCCESSFULLY HOSTED AN AWARENESS SESSION ON RUBBER POWER AEROPLANE MODELING COMPETITION ORGANIZED BY AERONAUTICAL SOCIETY OF INDIA (AESI).

THE GUEST SPEAKER, AERO-MODELING INSTRUCTOR & KEY RESOURCE PERSON MR. MADHAV KHARE ADDRESSED THE STUDENTS & INTRODUCED THEM THE DIFFERENT TYPES OF RUBBER POWERED AIRPLANES.

STUDENTS WILL BE TRAINED TO DESIGN & FABRICATE HIGH ENDURANCE RUBBER POWERED AIRCRAFT MODEL OF LESS THAN 10 GRAMS AND FLY THEIR DESIGNS IN A LARGE ENCLOSED AREA FOR LONGEST POSSIBLE DURATION, DURING THE FINAL COMPETITION.

SPACE AND ASTRONOMY CLUB HAD THE WONDERFUL OPPORTUNITY TO HOST AN EXHILARATING FLIGHT SIMULATOR & ARDUINO RADAR WORKSHOP IN ASSOCIATION WITH YOSKIES INDIA. OUR STUDENT MEMBERS IMMERSED THEMSELVES IN THE FASCINATING REALMS OF AVIATION AND RADAR TECHNOLOGY, IGNITING THEIR PASSION FOR EXPLORATION. WE WOULD LIKE TO EXTEND OUR SINCERE GRATITUDE TO YOSKIES INDIA FOR THEIR INVALUABLE SUPPORT AND FOR GENEROUSLY SHARING THEIR TIME TO PROVIDE OUR STUDENTS WITH THIS MEMORABLE AND ENRICHING EXPERIENCE!

MESA- MECHANICAL ENGINEERING STUDENTS ASSOCIATION

MECHANICAL ENGINEERING STUDENTS ASSOCIATION (MESA), WHERE INNOVATION MEETS CAMARADERIE! AS A DYNAMIC COLLEGE CLUB, MESA IS THE HUB FOR PASSIONATE INDIVIDUALS IN THE FIELD OF MECHANICAL ENGINEERING. WE'RE DEDICATED TO FOSTERING A VIBRANT COMMUNITY THAT THRIVES ON TECHNICAL EXCELLENCE, COLLABORATION, AND HANDS-ON EXPERIENCES. AT MESA, WE ORGANIZE AND PARTICIPATE IN A SPECTRUM OF ENGAGING EVENTS, FROM CUTTING-EDGE TECHNICAL COMPETITIONS TO COLLABORATIVE PROJECTS THAT PUSH THE BOUNDARIES OF INNOVATION.

SYMBITECH 23 WITNESSED AN EXHILARATING LEGOTRON EVENT, ORCHESTRATED BY THE MESA CLUB, LEAVING AN INDELIBLE MARK ON THE TECHNOLOGICAL LANDSCAPE OF THE CAMPUS. IN A REMARKABLE DISPLAY OF INGENUITY, THE ORGANISERS INTEGRATED TWO OF THE 17 SUSTAINABLE DEVELOPMENT GOALS (SDGS) INTO THEIR LEGOTRON CREATIONS, ADDING A LAYER OF SOCIAL RESPONSIBILITY TO THE TECHNOLOGICAL SPECTACLE.

THE AIR BUZZED WITH ANTICIPATION AS DIVERSE TEAMS ENGAGED IN THE LEGOTRON CHALLENGE, METICULOUSLY CONSTRUCTING LEGO ROBOTS THAT EMBODIED INNOVATION AND FUNCTIONALITY. BEYOND THE CLINKS OF LEGO PIECES COMING TOGETHER, THE EVENT CREATED A VIBRANT TAPESTRY OF COLLABORATION AND COMPETITION. THE MESA CLUB'S INITIATIVE NOT ONLY CELEBRATED TECHNOLOGICAL PROWESS BUT ALSO FORGED CONNECTIONS AMONG PARTICIPANTS, FOSTERING A SENSE OF UNITY AND SHARED PASSION

IN A DAZZLING DISPLAY OF INGENUITY, THE RECENT SHARK TANK EVENT CONDUCTED BY MESA AT SIT SHOWCASED THE REMARKABLE CREATIVITY OF ITS STUDENTS.
THE SHARK TANK EVENT PROVED TO BE A DYNAMIC PLATFORM THAT NOT ONLY CELEBRATED THE BRILLIANCE OF THESE STUDENTS BUT ALSO HIGHLIGHTED THE EXCITING INTERSECTION OF EDUCATION AND ENTREPRENEURSHIP IN THE REALM OF SCIENCE AND TECHNOLOGY. THE FUTURE OF INNOVATION IS UNDENIABLY BRIGHT, THANKS TO THE INVENTIVE SPIRIT EXHIBITED BY THESE TALENTED INDIVIDUALS.

DEPARTMENTAL EVENTS

CODING COMPETITION ON CFD WITH PYTHON: THE OBJECTIVE BEHIND ORGANIZING THIS COMPETITION WAS TO EQUIP STUDENTS WITH PROGRAMMING SKILLS REQUIRED TO SOLVE FLUID FLOW AND HEAT TRANSFER PROBLEMS.
TOTAL 19 PARTICIPANTS TOOK PART IN THIS COMPETITION ACROSS VARIOUS ISHRAE STUDENTS' CHAPTERS IN PUNE. THE CODING COMPETITION WAS ASSESSED BY DR ANIRBAN SUR WHO IS SENIOR ACADEMICIAN AT SYMBIOSIS INSTITUTE OF TECHNOLOGY PUNE. STUDENTS RECEIVED MANY FRUITFUL INPUTS FROM THE JURY MEMBERS.

SAE INTERNATIONAL CONFERENCE OFFTECON2023 WITH CHIEF GUEST MR MURLI IYAR, SAE GLOBAL FROM USA, DELEGATES FROM OTHER AUTOMOTIVE INDUSTRIES FROM INDIA. BRILLIANT MINDS CAME TOGETHER TO PUT FORWARD AN INTERESTING PRESENTATION OF IDEAS .

FROM F1 ENGINEER TO MENTOR EXTRAORDINAIRE: SHUBHAM SANGODKAR, THE MAESTRO WHO RACED INTO THE WORLD OF FORMULA 1, DESIGNED WINNING CAR COMPONENTS, AND IS NOW FUELING THE DREAMS OF ASPIRING ENGINEERS IN INDIA THROUGH HIS GROUNDBREAKING ACADEMY, UNITED MOTORSPORTS ACADEMY HELD A SESSION FOR THE SIT STUDENTS.

INDUCTION PROGRAM

THE INDUCTION PROGRAM OF THE FIRST YEARS CONTINUES! THE MECHANICAL DEPARTMENT HOSTS THE STUDENTS GIVING THEM AN EXCITING AND EXPERIENCE BASED KNOWLEDGE. THE STUDENTS DIVED INTO THE VAST WORLD OF SENSORS, TESTING THEM AND LEARNING THROUGH PRACTICALS. MAKING MODELS ON TINKERCAD AND TRYING OUT A NEW SOFTWARE WAS AN EDUCATING EXPERIENCE. THE JOURNEY DOESN'T STOP HERE - THE STUDENTS THEN FURTHERED THEIR LEARNING BY ASSEMBLING MODELS OF LASER CUT PARTS. THEIR EVENTFUL DAY ENDED WITH COMMEMORATING THIS DAY WITH MOMENTOUS.

SEMESTER EXCHANGE PROGRAMS

GLOBAL EXPOSURE

STUDENTS FROM THE DEPARTMENTS OF MECHANICAL ENGINEERING OFTEN SEIZE THE OPPORTUNITY TO PARTICIPATE IN SEMESTER EXCHANGE PROGRAMS ABROAD, BROADENING THEIR ACADEMIC AND CULTURAL HORIZONS. THIS EXPERIENCE NOT ONLY EXPOSES THEM TO DIVERSE TEACHING METHODOLOGIES BUT ALSO ALLOWS THEM TO ENGAGE WITH CUTTING-EDGE RESEARCH AND TECHNOLOGY IN THEIR FIELD ON A GLOBAL SCALE.

AS THESE STUDENTS IMMERSE THEMSELVES IN DIFFERENT EDUCATIONAL ENVIRONMENTS, THEY GAIN A UNIQUE PERSPECTIVE ON INTERNATIONAL ENGINEERING PRACTICES, FOSTERING ADAPTABILITY AND CROSS-CULTURAL COLLABORATION. THIS EXCHANGE NOT ONLY ENRICHES THEIR ACADEMIC JOURNEY BUT ALSO CONTRIBUTES TO THEIR PERSONAL GROWTH, MAKING THEM MORE WELL-ROUNDED PROFESSIONALS READY TO NAVIGATE THE CHALLENGES OF A GLOBALIZED ENGINEERING LANDSCAPE.

THIS YEAR THREE STUDENTS FROM THE DEPARTMENT OF MECHANICAL ENGINEERING ARE ABOUT TO BEGIN THEIR JOURNEY AT PRESTIGIOUS UNIVERSITIES LIKE LEEDS-BECKETT UNIVERSITY, UK, AND TECHNICAL UNIVERSITY OF HAMBURG, GERMANY.

RUJUTA BULAKH, SY
TUHH, GERMANY

ATHARV CHOPADE, SY
LEEDS-BECKETT, UK

ARAVIND AR, TY
TUHH, GERMANY

CONGRATULATIONS AND BEST WISHES TO ALL!!

WWR- WRENCH WIELDERS RACING

WELCOME TO WWR - WRENCH WIELDERS RACING, WHERE SPEED MEETS PRECISION! AS A DEDICATED STUDENT FORMULA RACING TEAM, WWR IS THE EPICENTER OF HIGH-OCTANE ENTHUSIASM AND ENGINEERING PROWESS. HERE, WE BRING TOGETHER PASSIONATE STUDENTS WITH A SHARED LOVE FOR SPEED AND INNOVATION. OUR MISSION? TO DESIGN, BUILD, AND RACE FORMULA-STYLE CARS THAT NOT ONLY PUSH THE LIMITS OF PERFORMANCE BUT ALSO CULTIVATE THE NEXT GENERATION OF AUTOMOTIVE ENGINEERS. WHETHER YOU'RE DRAWN TO AERODYNAMICS, MECHANICS, OR THE THRILL OF THE TRACK, MWWR PROVIDES A PLATFORM TO APPLY CLASSROOM KNOWLEDGE TO REAL-WORLD CHALLENGES.

THE WWR HAD STELLAR PERFORMANCE AT SUPRA SAEINDIA 2023! WE ARE THRILLED TO ANNOUNCE THAT NOT ONLY DID THE TEAM SHOWCASE EXCEPTIONAL ENGINEERING PROWESS ON THE TRACK, BUT THEY ALSO CLINCHED THE PRESTIGIOUS BUSINESS PRESENTATION AWARD. THIS RECOGNITION REFLECTS THEIR ABILITY TO ARTICULATE THEIR DESIGN, STRATEGY, AND INNOVATIVE SOLUTIONS WITH CLARITY AND PROFESSIONALISM.

IN ADDITION TO THE TEAM'S OVERALL SUCCESS, WE ARE ESPECIALLY PROUD TO HIGHLIGHT THEIR ACHIEVEMENT IN PROMOTING GENDER DIVERSITY AND INCLUSION. WWR EARNED THE TITLE OF "BEST GIRL PARTICIPATION," RECOGNIZING THE VALUABLE CONTRIBUTIONS OF FEMALE TEAM MEMBERS IN A MALE-DOMINATED FIELD. THIS ACCOLADE NOT ONLY UNDERSCORES THE TEAM'S COMMITMENT TO DIVERSITY BUT ALSO INSPIRES FUTURE GENERATIONS OF FEMALE ENGINEERS TO BREAK BARRIERS AND EXCEL IN THE WORLD OF MOTORSPORTS.

THE ELEANOR VECTOR 2.0 IS A HIGH-PERFORMANCE RACING CAR THAT SEAMLESSLY BLENDS POWER AND PRECISION. UNDER ITS SLEEK FIBERGLASS EXTERIOR, IT BOASTS A ROBUST KTM RC 390 ENGINE, DELIVERING IMPRESSIVE ACCELERATION AND TOP SPEEDS. THE INCORPORATION OF PUSH ROD SUSPENSIONS ENSURES OPTIMAL HANDLING, ALLOWING THE CAR TO NAVIGATE CORNERS WITH PRECISION AND AGILITY. TO ENHANCE AERODYNAMICS AND DOWNFORCE, THE ELEANOR VECTOR 2.0 FEATURES BOTH FRONT AND REAR WINGS, CONTRIBUTING TO STABILITY AT HIGH SPEEDS. THIS RACING CAR IS A TESTAMENT TO ENGINEERING EXCELLENCE, OFFERING AN EXHILARATING DRIVING EXPERIENCE FOR MOTORSPORT ENTHUSIASTS SEEKING A PERFECT BALANCE OF SPEED AND CONTROL.

The Editorial Team

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Dr. Anindita Roy

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