

LORDS INSTITUTE OF ENGINEERING & TECHNOLOGY

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Survey No.32, HimayathSagar, RR Dist, Hyderabad 500091



DEPARTMENT OF
Mechanical Engineering



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Presents

Mechronicle

MECHANICAL SEMESTER NEWSLETTER

Technical Article

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EVs and autonomy accelerate as Formula Student celebrates 25th year

Formula Student returned to Silverstone for a full-scale event

Joseph Flaig | IMechE News Article

12 Jul 2022

It feels good to be back, says Andrew Deakin.

Dr Deakin helped bring the competition to the UK after starting a Leeds University team in 1995, which competed in the US. A lot has changed between the first iteration in 1998 and the 25th annual event. "The level of sophistication has changed, going from a lot of carburetors in the very early years to everyone [using] fuel injection and that sort of stuff," he says, speaking on Friday (8 July). "There were some monocoques in the early years, but now there are a lot of monocoque cars. Teams have tried active suspension, CBTs and all those sorts of things as well, so lots of different technologies have been tried, and some of them are quite complex to do in a year for a student project. Some of them succeed very well, some fail. It's part of the competition."

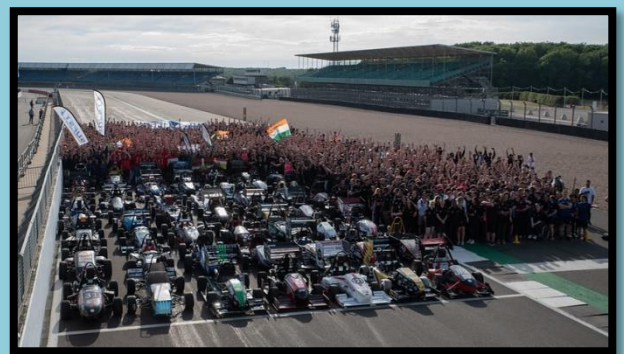


Figure: Formula Student returned to Silverstone

"We're hoping to go more and more towards the EV (electric vehicle) side of things, because that's what industry wants, it wants engineers with that kind of experience," he says. "It's a different technology to get used to. You can't just go to a scrapyard and pull an engine out of a broken motorcycle these days – you've got to design your own battery system and talk to a number of electric motor companies to select an electric motor, and then work out how to fit that all into the car with all the control systems and everything else."

College Vision:

Lords Institute of Engineering and Technology strives for excellence in professional education through quality, innovation and teamwork and aims to emerge as a premier institute in the state and across the nation.

College Mission:

1. To impart quality professional education that meets the needs of present and emerging technological world.
2. To strive for student achievement and success, preparing them for life, career and leadership.
3. To provide a scholarly and vibrant learning environment that enables faculty, staff and students to achieve personal and professional growth.
4. To contribute to advancement of knowledge, in both fundamental and applied areas of engineering and technology.
5. To forge mutually beneficial relationships with government organizations, industries, society and the alumni.

Department Vision:

To impart high standards of quality education which enhance students' career efficaciously, to become a holistic well-qualified engineer who are competent, innovative, entrepreneurial and research oriented to meet the standards of new millennium.

Department Mission:

DM1: An integrated educational approach that blends knowledge of engineering fundamentals, technical skills, practical knowledge and research.

DM2: To enrich undergraduate experience of distinctive academic curriculum through interaction with major stake holders, hands-on learning, team work, management and multi-disciplinary skill set.

DM3: To make students aware of professional responsibilities, ethics, global demands, sustainable solutions, environmental, technological challenges and the needs of lifelong learning.

DM4: To prepare students in developing solutions of global standards through research and innovation, design and development of demand-based projects, entrepreneurial skills and employability capabilities.

Program Educational Objectives (PEOs)

The educational objectives of the Mechanical Engineering program are designed to produce competent engineers who are ready to contribute effectively to the advancement of Mechanical Engineering causes and to accommodate the needs of the profession. The Mechanical Engineering department is dedicated to graduating Mechanical Engineers who

PEO1: To establish themselves as successful professionals with strong fundamental knowledge in basic and engineering sciences to find suitable solutions of technological and real-life challenges using innovative tools.

PEO2: To enhance technical competency and problems solving skills through state of art facilities for adequate solutions to technical problems.

PEO3: Acquire high skill-set by continuous training, multi-disciplinary activities, team work, effective communications, Information Technology tools usage and ethics so that students shall acquire good job opportunities and also will help in their higher education.

PEO4: Giving consultancy services to industrial, Societal challenges and promoting department-industry interactions, by enhancing technical, managerial, environmental responsibilities and lifelong learning with sustainable development.

Program Specific Outcomes (PSOs)

PSO1: Professional Skills: An ability to understand the basic concepts in mechanical Engineering and to apply them to various areas, like production, thermal, designing etc., in the design and implementation of complex systems.

PSO2: Problem-Solving Skills: An ability to solve complex Mechanical Engineering problems, using latest hardware and software tools, along with analytical skills to arrive cost effective and appropriate solutions.

Program Outcomes (POs)

Engineering Graduates will be able to:

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: 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.

PO3: 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.

PO4: 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.

PO5: 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.

PO6: 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.

PO7: 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.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

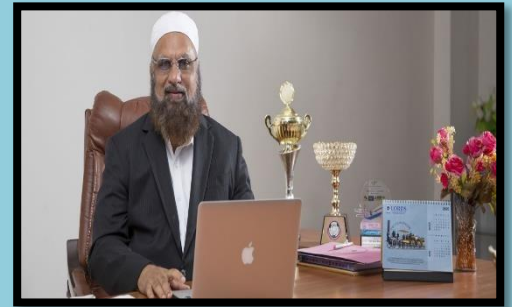
PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and 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.

PO12:Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

FOUNDER AND CHAIRMAN'S MESSAGE:

The pride of every student and staff would be in his/her college. A College may reach heights of glory but without materials like a college newsletter, the outside world may not know of it. The essential purpose of our college newsletter is to inform, engage, inspire and entertain a diverse readership-including alumni, parents, students, faculty, staff and other friends of the college-by telling powerful stories that present a compelling, timely and honest portrait of the college and its extended family. I am happy that there is a dedicated team of staff and students who have brought out the Newsletter of Mechanical Engineering Department of our college.



SECRETARY 'S MESSAGE:

Engineers play the most vital role in nation building. They create new inventions using best engineering technologies to make human life more comfortable, secure and productive. We need enormous number of engineers to write next story of success. We have identified the needs of modern engineering and technology education for modern age students, with a vision and mission accompanying transparency, accountability and accessibility which keeps us abreast and also ahead of our competitors. At the outset, I send my greetings to the Editorial Board of Mechanical Engineering Department, for working on the newsletter. This newsletter should be a good source of guidance for faculty and coming batches of students in choosing activities of their choice in their future for building their careers. I appreciate the efforts of the Editorial team who have done an excellent job in compiling activities over the year and disseminate them through this Newsletter as well as on the college website.

VICE CHAIRMAN'S MESSAGE:

Lords Institute of Engineering and Technology, (Autonomous) was established to impart academic excellence by providing a conducive environment for the overall personality development of young technocrats. Spanning more than a decade, the college is covering many milestones year after year incorporating all modern mechanisms of technological research and application. Within this span of time, it has emerged as one of the leading Engineering colleges. LIET renders perfection in academics and dynamic environment to motivate everyone –the management, faculty and students to deliver their best. Our objective is to create a class of qualified, innovative and dynamic professionals for the Engineering sector, for self-employment and for academic & research institutions of socio-economic importance.



DIRECTOR'S MESSAGE:

Greetings and a very warm welcome, our college work diligently to realize its mission of providing the best learning, teaching and research opportunities to students and academicians alike, it continues to supply students with the basics of modern knowledge and high values. The research activities of our faculty lead an extraordinary enrichment of students which is realized at both the graduation and Masters levels. Our students enjoy learning the rigors of new discoveries and acquire skills of inquiry, evaluation, and communication that provide a foundation for then Ext phases of their careers and lives.



PRINCIPAL'S MESSAGE:

Our college has grown abundantly in the recent past. It continues to sustain its growth. People reading this newsletter will realize the tremendous changes that are happening in the campus. The newsletter is presenting a glimpse of the growth of the institution on many fronts. The highly qualified and dedicated members of the staff have always stood shoulder to shoulder with the management and have carried out their duties with high level of commitment. This newsletter has recorded achievements such as conferences attended by staff members and students, competitions won by the hugely talented students, innovative projects carried out by students with the guidance of faculties, among others. Let's give our best and make this institution a modern sanctuary of learning through our diligence, devotion and dedication. I congratulate all the contributors and the editorial board for bringing out such a beautiful newsletter.



VICE-PRINCIPAL'S MESSAGE:

It gives me immense joy to learn that our college has its deep roots in the field of education in the city of Hyderabad. I feel proud and privileged to be the part of this Magnificent Institution. At this juncture, I gratefully acknowledge the yeomen service rendered by the Visionary Predecessors, dedicated teachers and ever supporting parents who have worked selflessly and tirelessly to bring this newsletter of Mechanical Engineering department. I am pleased to acknowledge that our college lays its stress not just on academic excellence but also on “character formation with academic excellence”.



CHIEF EDITOR'S MESSAGE:

It gives me great pleasure to bring you the Newsletter of the 2nd Semester of AY 2021-22. This issue offers a panoramic view of the academic, professional and cultural activities of the college. The name and fame of an institute depends on the caliber and achievements of the students and teachers. I would like to place on record my gratitude and heartfelt thanks to all those who have contributed to make this effort a success. I profusely thank the management for giving support and encouragement and a free hand in this endeavor. The editorial team thanks all its patrons for their support for the newsletter. On that note, I wish you all ‘Bonne lecture’. I welcome suggestions from all our readers who wish to see their ideas incorporated in the subsequent issues. Please feel free to provide your feedback and send pertinent information with photos for inclusion in our forthcoming issues of newsletter.

Seminar on Recent Advances in Automobile Engineering

A Seminar on “Recent Trends in Automotive Technologies” was conducted on 4th June 2022 in CSE Seminar Hall 2nd floor at 9:30AM. The session started with welcoming the dignitaries, **Mr. Mahesh Shinde GM, Head – Indoor Testing (Erc), Tata Motors Limited, Pune, India, Manasi Mone, Deputy General Manager Tata Motors and Mohammad Ameen Shaikh - Young Member Chairperson IMechE India** along with **Dr.C.V.Narsimhulu, Principal, LIET(A), Dr. Syed Azam Pasha Quadri, Vice Principal, HOD-MED, LIET(A), Dr. Syed Nawazish Mehdi, Professor, Dean-FDP, LIET(A), Mr. R.Suman, Associate Head, Department of Mechanical Engineering, LIET(A).**

Moving on further, the session was started by , Mr. Mahesh Shinde (GM), Head – Indoor Testing (Erc),Tata Motors Limited, Pune, India, thrown a light on Tata Motors, IMehE Chapter, events going to be held and also he explained about different electrical vehicles. His rich experiance in industry made the event as interactive session where in students have shared their opinions also clarified their doubts in the field of Automotive industry also about electrical vehicles. The second session was started by Manasi Mone, Deputy General Manager Tata Motors. She cracked her session on Cracking or Cracking the Code: EVs or Bio fuels; She explained various government policies for biofuels also presented the benefits of electrical Vehicles.



Moving ahead, the third session was started by Mohammad Ameen Shaikh - Young Member Chairperson IMechE India (YMC India) who has started the session with energetically to inspire the younger generation. He briefly explained about innovations in automotive vehicles and modifications took in recent years also brought his industrial experiance to enrich students’ knowledge. Further, Mr.Syed Tanveer Ahmed, Joint Secretary of Lords Institute of Engineering and Technology and Mr.R.Suman has spoken about ever changing needs of the society and encouraged the students to take active participation in IMechE events to enhance their skills. The session was end with vote of thanks.

Seminar on Opportunities in High Education through GATE

A Seminar on **Opportunities in Higher Education through GATE** is conducted on **1st June 2022** for **2nd** Year Mechanical Engineering Students by the resources person **Mr. Rajashekhar**, Manager, **Rite Academy** AC Guards Rd, Red Hills, Lakdikapul, Hyderabad, Telangana .

He told, "Being a graduate will not ensure you to secure a strong position in this competitive era. If you want an unprecedented career, then you should go for higher studies which will not only boost up your career but also make your future brighter and scintillating. Hence, these days, students are opting for the higher education and are taking preparation for various competitive exams."

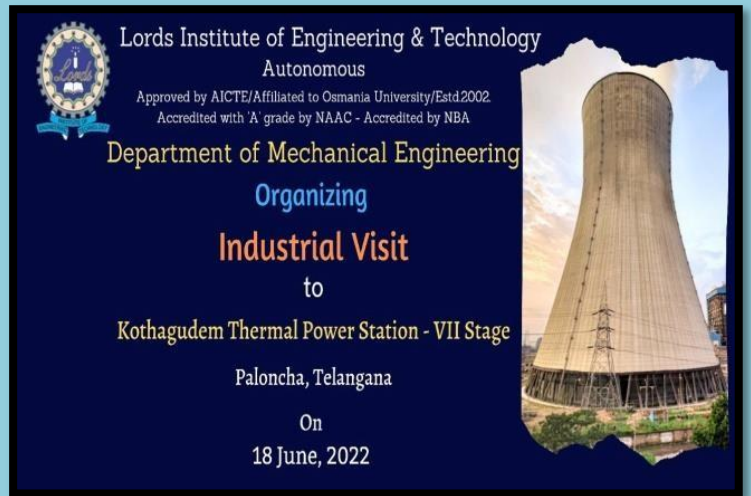
"GATE (Graduate Aptitude Test in Engineering) is one of the most popular and prestigious competitive exams that mostly all students appear, who are aware of the various available *opportunities after gate exam*. All the science and engineering students those who want to pursue a higher degree such as M.Tech, ME or post-graduate degree in their respective subjects. Every year all the aspiring students of science and engineering across the country are gearing up for GATE so that they can enroll themselves in the IITs and other prestigious institutes and can kick start their career in a good way. The key *benefit of GATE exam* is that if they score well in the exam, then they are eligible to select their institutes on the basis of their score.



Here are some of the best GATE preparation tips. Usually, every year the Indian Institute of Science and seven Indian Institute of Technology jointly conduct this exam. A student can attempt the GATE exam in any number of times if the basic criteria are fulfilled by the candidate. If you crack this exam with a good score, then you will be blessed with numerous *opportunities after GATE exam*.

Industrial Visit to KTPS, Paloncha

Department of Mechanical Engineering has organized the Industrial Visit to **Kothagudem Thermal Power station**, Paoncha in telangana for **2nd Year and 3rd Year** Under graduates Mechanical Engineering Students on **18th June 2022** under the supervision of **Dr. Syed Azam Pasha Quadri**, Vice Principal Cum Head of the Mechanical Engineering Department, Mr R. Suman, Mr. Pachchinavar. 40 Students participated in the industrial Visit.



Industrial Visit to BHEL, Ramchandrapuram

Department of Mechanical Engineering has organized the Industrial Visit to **BHEL**, Ramchandrapuram for **2nd Year and 3rd Year** Under graduates Mechanical Engineering Students on **10th June 2022** under the supervision of Mechanical Engineering Faculties Mr. Syed Aslam, Dr. Sumeet .H, Mr. Mohd

Khalid Ahmed, Mr. Md Misbahuddin, Mr. Asif Kattimani and Mr. G. Ajay Kumar.60 Students were Participated.



Parent Teacher meet 2K22

Parent-Teachers Meeting for OU-IV Semester and VI Semester students held on 04/06/2022, at Head of the Department chamber, LIET (A) from 2:30PM Onwards.

The main objective of the meeting is to create a common platform, where Faculties and parents come together to discuss student's performance and devise ways to enrich the teaching learning process. Whilst this happens on a total offline basis in which more than 46 Parents visited.

The meeting has started with welcoming parents. Mentors shared their mentees performance in all aspects including their performance in IV, VI semester, also students' attendance, Internal Marks, OU recent results, CRT for Placements, Any indiscipline, College / department development activities, Strengths of your department/ College, etc.

Parents became aware of the institute's rules and regulations, methodologies of teaching & learning for the overall welfare of students. Parents were encouraged to appreciate student's participation in all academic activities.



The PTM came to an end with the conclusion that the progress and development of the students depend on the joint efforts of parents and teachers.

Project Expo- 2K22

Project Expo-2K22 was conducted by Department of Mechanical Engineering on **8th July 2022**. **Prof M. Chandra Sekhar Reddy**, Professor, Department of Mechanical Engineering, University College of Engineering, OU, Hyd, **Dr. T Zaheer Ahmed**, Prof Mechanical Department of Mechanical Engineering, Mallareddy Engineering College Hyd, **Dr. Syed Danish Mehdi**, Prof Mechanical Department of Mechanical Engineering, Deccan College of engineering & Technology, Hyd, **Mr N.V.S Ramachandra Rao**, Manager (CNC & Heavy Parts), HMT (Pragya Division), Hyd, **Mr. Mohammed Siraj Uddin**, Entrepreneur, Hyd.



Lords Mechanical Engineering student Mr. Mohammed Misbah Uddin successfully incubated a unique startup in 2022 at LordsTBI. Misbah designed and patented world's first electric engine, known as the Combustion Free Engine As an innovative Startup, he registered his company as Flagship Automobiles,



an automobile manufacturing company.



With Combustion Free Engine (CFE) .His vision is to contribute and offset global carbon footprint .Nevertheless, LORDS incubated innovation also addresses 10 United Nation Sustainability Development Goals. A few of the investment platforms where the startup idea is being pursued for Seed Funding are DRDO, Atal Innovation Mission, T-Hub, Intenta Inventor.

Energy Multi-Purpose Agricultural Machine was designed and developed by Mechanical Engineering Students to ease the Farming needs, Granted Patent by the Indian Patent Office.

Urban Air Purification System is developed by Mechanical Engineering students to tackle the air pollution at peak polluted areas of the city.

Mechanical Engineering students have developed cost effective, Frugal Ventilation System which can supply 92% Oxygen concentration for 2 people at 7LPM to tackle COVID-19 Challenge during the peak pandemic period.

Students Awards

S. No	Name of the Students	Name of the Event	Topic	Venue	Date	Award/ reward
1.	Mohd Abdul Wakeel	Jubilation 2K22	Engine Assembly & Disassembly	NEC, Kotappakonda	07 May 2022	First Prize
2.	Azam Bin Siddiq	Technovation22	CAD Modeling	MGIT, Hyd.	30 June 2022	Second Prize
3.	Mohammed Mustafa	Technovation22	CAD Modeling	MGIT, Hyd.	30 June 2022	Third Prize


Students Participation

S. No	Name of the Student	Name of the Event	Topic	Venue	Date
1.	Mir Mujtaba Ali	Mecharena 2022	3D Printing Workshop	OU, Hyderabad	26,27 April 2022
2.	Abdul Moen	Mecharena 2022	3D Printing Workshop	OU, Hyderabad	26,27 April 2022
3.	Mohammed Mehboob	Mecharena 2022	IC Engine Workshop	OU, Hyderabad	29,30 April 2022
4.	M.N. Mohiuddin Zaid	Mecharena 2022	IC Engine Workshop	OU, Hyderabad	29,30 April 2022
5.	Shaik Aqueel Ahmed	Mecharena 2022	IC Engine Workshop	OU, Hyderabad	29,30 April 2022
6.	Anish Haider	Jubilation 2K22	Engine Assembly & Disassembly	NEC, KotappakondaRd, Narasaraopeta, Andhra Pradesh	07 May 2022
7.	Mirza Zahid Abdullah Baig	Jubilation 2K22	Engine Assembly & Disassembly	NEC, KotappakondaRd, Narasaraopeta, Andhra Pradesh	07 May 2022
8.	Mohammed Shafeeq Uddin	Jubilation 2K22	Engine Assembly & Disassembly	NEC, KotappakondaRd, Narasaraopeta, Andhra Pradesh	07 May 2022
9.	Md Saklain Raza	Jubilation 2K22	Engine Assembly & Disassembly	NEC, KotappakondaRd, Narasaraopeta, Andhra Pradesh	07 May 2022
10.	Mohd Abdul Wakeel	Jubilation 2K22	Engine Assembly & Disassembly	NEC, KotappakondaRd, Narasaraopeta, Andhra Pradesh	07 May 2022
11.	Aqib Ibrahim	Technovation22	Robotics workshop	MGIT, Hyd	30 June 2022
12.	Mahed Bin Ali	Technovation22	Robotics workshop	MGIT, Hyd	30 June 2022
13.	Mirza Waseemullah	Technovation22	Engine Diagnosis	MGIT, Hyd	30 June 2022
14.	Syed Imad Uddin	Technovation22	Engine Diagnosis	MGIT, Hyd	30 June 2022
15.	Md Sohail	Technovation22	Engine Diagnosis	MGIT, Hyd	30 June 2022

16.	Shaik. Hayath Tafazzul	Technovation22	CAD Modeling	MGIT, Hyd	30 June 2022
17.	Azam Bin Siddiq	Technovation22	CAD Modeling	MGIT, Hyd	30 June 2022
18.	Mohammed Mustafa	Technovation22	CAD Modeling	MGIT, Hyd	30 June 2022

Faculty Achievements

Prof Nawazish Mehdi, Mechanical Engineering Department, Lords Institute of Engineering and Technology is selected as **supervisor** for the Ph.D admission of **Mr. B. Sunderlal Naik** under the topic of **“The Performance evaluation of steam ejector using CFD analysis”** from Office of the Dean, Faculty of Engineering, **Osmania University**, and Hyderabad.



**Office of the
Dean, Faculty of Engineering
Osmania University, Hyderabad-500 007**

E-mail: deanenggou@gmail.com Tel.No.8331997295
No.47/DFE/2022/PhD/Order Date 12.05.2022

ORDERS

Sub: Admission to Ph.D Programme in the Faculty of Engineering.
Ref: Lr.No.1086 / F / Acad-III / 2018 Date 18.08.2018


Sanction is accorded for the admission of the following candidate into Ph.D Programme in the **Department of Mechanical Engineering**, as per the details given below for the year 2014-15, 2015-16, 2016-17.

S. No.	Name and Reg. No.	Father Name	Gender	Categor	Topic of Research	Name of the Supervisor	FEET
65	B.Sunderlal Naik 1005-2018-6065	B.Shankar Raj Naik	M	ST	The performance evaluation of steam ejector using CFD analysis	Prof. Nawazish Mehdi, Lords Institute of Engg. & Technology Prof. M. Chandrabekar Reddy, OUCE (Co-Supervisor)	Part Time

You are requested to submit joining report within 15 days from the date of this order in the proforma enclosed herewith along with under mentioned documents in the Office of Dean, Faculty of Engineering, O.U.

- Undertaking from the candidate seeking **No Hostel Facility**
- Attested copies of all documents including community certificate,

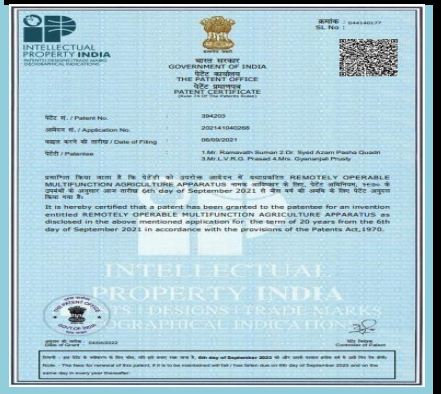
Further you are requested to submit half yearly reports (Jan- June & July - Dec) to this office regularly through Research Supervisor designated.


**Dean
Faculty of Engg O.U.**

Copy to :

- The Principal, UCE,O.U.
- The Head, Mechanical Engineering, UCE, O.U.
- The Chairperson, BoB (University) in MED, O.U.
- The Dy. Registrar, (Academics) O.U.
- The Controller of Exams, O.U.
- The Person Concerned

Patents Publications

S. No.	Application Number	Name of Faculty	Title of the Invention	Date of Publication
1	202241039160	Mr Mohammed Abdul Junaid & Mr Asif Kattimani	Design and Fabrication of Epoxy Coating Machine	15/07/2022
2	202141040268 Patent No: 394203	1. Mr. Ramavath Suman 2 . Dr. Syed Azam Pasha Quadri 3 . Mr.L.V.R.G. Prasad 4 . Mrs. Gyananjali Prusty	Remotely Operable Multifunction Agriculture Aparatus 	06/09/2021

NPTEL Certifications

National Programme on Technology Enhanced Learning (NPTEL) is a project of **MHRD** initiated by seven **Indian Institutes of Technology (Bombay, Delhi, Kanpur, Kharagpur, Madras, Guwahati and Roorkee)** along with the Indian Institute of Science, Bangalore in 2003, to provide quality education to anyone interested in learning from the **IITs**. The main goal was to create web and video courses in all major branches of engineering and physical sciences at the undergraduate and postgraduate levels and management courses at the postgraduate level. **Mr. Syed Aslam** got **72%** in NPTEL Online Certification in “**Non-Conventional Energy Resources**” Course.

