

O.P. Jindal University, Raigarh

Quarterly Report [April-June 2023]

Department of Mechanical Engineering Major Activities

A Events and Activities Organized by Dept. of Mechanical Engineering

1. Department of Mechanical Engineering, OP Jindal University, Raigarh in association with SAE OPJU Collegiate Club organized a One-week online Workshop on “AutoCAD Mechanical” during 03rd – 11th April 2023 for the final year diploma students. The key objective of the workshop was to teach the basics of CAD software to Diploma students and help them understand the applicability of such softwares in solving engineering problems. 50+ participants from outside and within the university got benefitted out of this workshop. The coordinators of the workshop were Dr LR Bhandarkar and Ms. Leena Behera.



**Online Course On
AUTOCAD
MECHANICAL
WORKSHOP**
For Absolute Beginners

AutoCAD
One of the best leading 2D & 3D Designing software
Developed By Autodesk, Inc.

Free Software
AutoCAD License Version provided by Autodesk for 1 year

Training Objectives:

- To use the fundamental features of AutoCAD.
- To Navigate the AutoCAD User interfaces.
- To use the precision drafting tools in AutoCAD to develop technical drawings.
- To present drawings in a detailed & visually impressive way.
- To improve the employability skills

Why Sign-up!

- Professional Trainer
- Certificate will be provided after successful completion of the workshop
- Unlimited practice time during the workshop

Final Year Diploma Engineering Students Only

- Mechanical Engineering
- Instrumental Engineering
- Production Engineering
- Steel Technology of Mechanical Engineering

Date of Commencement : 03.04.2023
Course Duration : 03.04.2023 - 11.04.2023 (10 Hours)

Register Online
<https://forms.gle/foUjZxTyJmKdZBm9>

Free Registration
Seats are Limited

Contact: Mrs. Leena Behara - 9424141293 Coordinator: Dr. L. R. Bhandarkar
Organized By: Department of Mechanical Engineering, OP Jindal University, Raigarh (C.G.)

2. The Department of Mechanical Engineering (OPJU) in association with NSS (OPJU) organized an Awareness campaign on “My Village, Clean Village”, “Importance of Voting”, “Dengue” and “Save Soil” under the AICTE Activity Points Programme at Samaruma village, Punjipathra on 18th April, 2023. In the program about 44 students of 8th semester actively participated. The students formed groups and interacted with the villagers on technical aspects of saving soil, dengue, and created awareness about voting rights.



- Industrial training is a vital part of the curriculum at OP Jindal University, Raigarh to make students Industry ready. In order to expose students to the real world of work, latest technologies, and specific practices in their respective fields of specialties. The Department of Mechanical Engineering organized two-week training for Diploma Engineering students at Nalwa Steel and Power Limited (NSPL), Raigarh and Steel Structural Division (SSD), JSP Raigarh.



- Department of Mechanical Engineering organized Five days workshop during 24th – 28th April 2023 for the 8th semester students in association with Career Development Cell, OPJU Raigarh. The key objective of the workshop was to make students ready for campus interviews. The workshop covered various important aspects to be known by a fresher attending a job interview and was well-received by all the students.



- The Department of Mechanical Engineering (OPJU) in association with NSS (OPJU) organized an Awareness campaign on “Clean Village”, “Dengue”, “Voter Awareness” and “Save Soil” under the AICTE Activity Points Programme at Punjipathra village on 16th May 2023. In the program about 40 students of 8th semester actively participated. The students formed groups and interacted with the villagers on technical aspects of saving soil, dengue, and created awareness about voting rights.

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- The Department of Mechanical Engineering in association with Modelling and Simulation Lab organized a value-added course on " Solidworks and ANSYS CFD" from 15th to 19th May 2023, for the students of 6th semster. The students learned the concept of creating a model through Solid Works and used the model to simulate the performance of systems. The participants were blessed with words of motivation by Honorable Vice Chancellor, Dr R D Patidar in the valedictory session.





7. The Department of Mechanical Engineering, in association with the Centre of Excellence in Manufacturing and Automation and the OPJU Innovation Center, organized 3 days (22nd to 24th May 2023) student workshop on 3D printing and laser cutting. Innovation such as laser cutting is a powerful tool that uses a focused beam of light to precisely cut and engrave various materials, revolutionizing manufacturing and design processes.



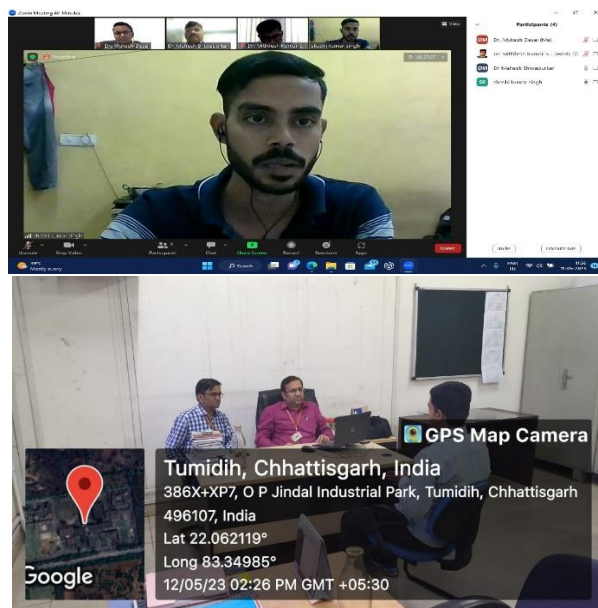
8. The Department of Mechanical Engineering in association with the Centre of Excellence in Manufacturing and Automation (CoEMA), Institution Innovation Council (IIC), Fronius India Private Limited has successfully concluded a month-long Industrial Internship Program for B.Tech students from other esteemed Institutions. The internship provided hands-on learning opportunities to develop welding skills using both virtual and real equipment. They also engaged in non-destructive testing and attended expert lectures on manufacturing advancements. Industry visits exposed them to real-life operations, while a visit to the OPJU Innovation Centre (OIC) showcased cutting-edge technologies. The program emphasized work-life balance with an adventure trip, and a specialized workshop on robotic welding provided comprehensive insights.

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9. Department of Mechanical Engineering organized Mock Interview sessions during 11th – 12th May 2023 for the 8th semester students in hybrid mode. The key objective of the program was to make students ready for campus interviews.



10. Dr. Mukesh S Desai, Associate Professor, Department of Mechanical Engineering delivered an expert talk on the topic "How to Prepare for Campus Drive" at Govt Polytechnic Rengali, Sambalpur, Odisha on 08th May 2023.



11. The Department of Mechanical Engineering in association with the Research and Development Cell organized an expert talk on the topic "The Applications of Thermal and Fluid Engineering" on 18th May 2023. The speaker for the session was *Dr. Sunil Kumar, Texas A&M University, USA, he discussed in

detail the importance of thermal and fluids engineering. 100+ participants attended the session.



12. The Department of Mechanical Engineering in association with Centre of Excellence in Manufacturing and Automation has organized its Manufacturing talk-9 on 11th May 2023. The speaker for the session, Mr. Satvik Sabarad, Manufacturing Engineer at Tesla, USA shared his knowledge in the area of Design of Experiments, Predicting the impurities by Machine learning approach, Image processing using CNN in additive manufacturing, ANN and other relevant subjects. The session was attended by 50+ participants.



13. The Department of Mechanical Engineering in association with the Centre of Excellence in Manufacturing and Automation (CoEMA), Institution Innovation Council (IIC), Fronius India Private Limited has successfully concluded a month-long Industrial Internship Program for B.Tech students from other esteemed Institutions. The internship provided hands-on learning opportunities to develop welding skills using both virtual and real equipment. They also engaged in non-destructive testing and attended expert lectures on manufacturing advancements. Industry visits exposed them to real-life operations, while a visit to the OPJU Innovation Centre (OIC) showcased cutting-edge technologies. The

program emphasized work-life balance with an adventure trip, and a specialized workshop on robotic welding provided comprehensive insights.



- An interactive session was organized by the Department of Mechanical Engineering, OP Jindal University on 19th June 2023 to encourage students for identifying internship opportunities within and outside India. 50+ students were leveraged by the session titled "How to hunt an internship opportunity". The speaker of the session was Mr. Somashish Pradhan, Manager, Structural Steel Division (SSD) Punjipathra.



- The talented student team Vidyut is working extensively on their project for the upcoming F1 racing car event, SAE SUPRA 2023 scheduled to be held at Buddha International Circuit, Greater Noida during 10th – 13th July 2023. As members of the SAE OPJU Collegiate Club, these students demonstrate the University's motto of "learning by doing." Throughout the journey of building the racing car, the team has actively engaged in techno-commercial discussions and knowledge-sharing sessions. It's a fantastic opportunity for hands-on learning and growth. Wishing the team all the best in their endeavours!



16. On June 2nd, 2023, the Department of Mechanical Engineering hosted a project exhibition for the 8th-semester B.Tech students. The event showcased the remarkable work of the final-year students, who exhibited great enthusiasm while presenting their projects to the Honourable Vice Chancellor Dr. R.D. Patidar, mentors, and faculty members. After careful assessment two projects were selected for the Best Project Award. The details of the projects and project members are as follows:

First prize

Design and structural analysis of Formula student vehicle

Mr. Ayush Pandey, Mr. Gurjot Singh Saini, Mr. Yasharth Mishra, Mr. Shubham Kumar

Second prize

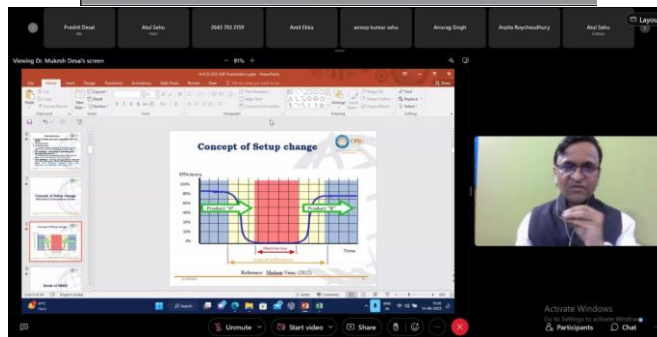
Artificial intelligence based autonomous metal detector robot

Ms. Divya Kori, Mr. Prince Ku. Yadav, Mr. Pawan Kushwaha, Mr. Ranjeet Kumar, Mr. Harsh Patel





17. Dr. Mukesh S Desai, Associate Professor, Department of Mechanical Engineering delivered an expert talk on the topic "Single Minute Exchange of Die (SMED) – A Lean Manufacturing Tool " in the two-week professional training in “Allied Tools and Techniques under Interdisciplinary Engineering Fields for Learning Sustainability” organized by the Department of Industrial and Production Engineering, School of Studies, Engineering and Technology, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) during 05th – 16th June 2023.



18. Dr. Siddharth Chakrabarti, Dr. Mahesh Bhiwapurkar, Dr. Mithilesh Sahu and Dr. Satish Kanhed presented their individual research paper during the International Conference on Mechanical Engineering: Researches and Evolutionary Challenges organized by the Department of Mechanical Engineering NIT Warangal during 23rd-25th June 2023.

B Achievements, Awards & Recognitions

1. Team "Vikrant" comprising of the students from the Department of Mechanical and Electrical engineering, OP Jindal University participated in in a National level event SIEP- Electric Bike Challenge during 14th – 18th April 2023 organized by ISIE, India at Galgotia University. The Department of Mechanical Engineering congratulates Mr. Shikhar Pandey, Mr. Ranveer Singh, Mr. Jayant Shekhar Singh, Mr. Rohan Sharma, Mr. Shubham Ku. Thakur and Mr. Anuj Sangwan, 4th semester students for successfully participating and representing the University at National level.



2. It is always great to see students taking an active interest in extracurricular activities, especially those that challenge them to learn and grow. The Department of Mechanical Engineering congratulates Mr Kishan Patel, Mr M Rahman, Mr Raju Kumar Yadav, and Mr Rajan Kapri, 6th semester students for participating in Innoskill Advanced Guard Event 2023 at Manav Rachna University in online mode.



3. Dr Mithilesh Sahu, Sr. Assistant Professor and Dr Saroj Kumar, Assistant Professor of the Department of Mechanical Engineering attended a three-day International symposium on “Additive Manufacturing of Metallic Alloys and Composites: Academic and Industrial Perspective” during 11th – 13th April 2023. The symposium was organised by IIITDM, Jabalpur, in online mode.





4. Dr. Umesh Vishwakarma, Dr. Siddharth Chakravarti, Dr Mithilesh Sahu, Dr. Mahesh Bhiwapurkar, Prof. Jitesh Singh, Department of Mechanical Engineering participated in 5 days FDP on “Opportunities and Challenges in Artificial intelligence & Machine Learning for Mechanical Engineers” during 24th – 28th April 2023. The FDP was organised by Centre for Continuing Education, NIT Warangal.



5. The Department of Mechanical Engineering congratulates Mr. Shriyansh Verma, B.Tech 4th semester student for successfully completing the 12 week NPTEL course on “Fundamentals of Automotive Systems” offered during the session January-April 2023.



The certificate is awarded to **SHRIYANSH VERMA** for successfully completing the course **Fundamentals of Automotive Systems** with a consolidated score of **54 %**.

Online Assignments	22.03/25	Proctored Exam	31.5/75
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Total number of candidates certified in this course: **1088**

Prof. Devendra Jalihal, Centre for Outreach and Digital Education, IITM
 Jan-Apr 2023 (12 week course)
 Prof. Andrew Thangaraj, NPTEL Coordinator, IIT Madras

Indian Institute of Technology Madras | swayam

Roll No: NPTEL23DE01S43270135 | To validate the certificate | No. of credits recommended: 3 or 4

6. The Department of Mechanical Engineering extends its congratulations to 9 students from the 7th semester for their successful selection in TATA STEEL for a long-term internship.



OPJU
 University of Steel Technology and Management

Congratulations

"Department of Mechanical Engineering
 Batch 2024 for selection at
TATA STEEL
 Jamshedpur for Long-term Internship"

Vipul Kumar Upadhyay | Md Fazlur Rahman | Aman Kumar
 Kumar Raushan | Ankit Raj | SV Saishankar
 Ankur Kumar Singh | Pratik Singh | Devesh Patel

7. The Department of Mechanical Engineering extends its congratulations to 6 students from the 7th semester for their successful selection in Jindal Steel & Power Machinery Division for a long-term internship.



8. The Department of Mechanical Engineering extends its congratulations to Dr. Satish Kanhed, Senior Assistant Professor, for being honored with the best paper award at the First International Conference on Mechanical Engineering: Researches & Evolutionary Challenges (ICMech-REC 2023) organized by the Department of Mechanical Engineering at NIT Warangal, India. Dr. Kanhed's paper titled "ZnO/Ag Reinforced Conventionally Sintered Hydroxyapatite with Varying Porosity: A Comparative Study" was recognized for its excellence.

C Research publications and patents data provided by CRE

Journal/Book Chapter Publications

Sr. No.	Faculty Name	School/ Department	Name of Journal/Book	Title of the Paper/Book Chapter	Month of Publication/ Acceptance
1	Dr. Mithilesh Kumar Sahu, Dr. Siddharth Chakrabarti	Mechanical	Book Publisher : IGI Global	(Book) Sustainable Approaches and Strategies for E-waste Management and Utilization	April
2	Dr. Saroj Kumar	Mechanical	Journal of Computational Science (Elsevier)	Better Decision-Making Strategy with Target Seeking Approach of Humanoids using Hybridized SOARANN-Fuzzy Technique" in "Journal of Computational Science (Elsevier)	April
3	Prof. Jitesh Kumar Singh	Mechanical	Cellulose (Springer)	Study on the physical, mechanical, and thermal behaviour of RHN blend epoxy hybrid composites reinforced by Borassus flabellifer L. fibers	April

4	Prof. Dharmendra Singh Saini	Mechanical	Transactions of the Indian Institute of Metals-TIIM (Springer publications).	Optimization of predicted wear and friction for electroless Ni-P by RSM, Fuzzy logic and ANFIS using TOPSIS	May
5	Dr. Siddharth Chakrabarti	Mechanical	European Chemical Bulletin	Review of Composite Desiccants and Their Properties for Rotary Dehumidifiers	June

Patent Applied/Published/Grant

S. No.	IP Registration Number	Name of Faculty	School/ Department	File Date	National /International	Status
1	380834-001	Dr. Siddharth Chakravarti	Mechanical	06/03/2023	National	Published

E Placement data will be provided centrally by CDC