DEPARTMENT OF MECHANICAL ENGINEERING

VISION

To become the center of excellence to provide the state-of-the-art engineering education in mechanical engineering and making individual to be capable of building nation in the new millennium.

MISSION

M1: To provide excellent teaching and learning process for the students to meet the current needs and standards of the industries and higher learning process.

M2: To promote research and development activity in the recent emerging trends of mechanical engineering branch.

M3: To provide the students with good communication skill, lifelong learning, team spirit and leadership qualities to face the current society.

ABOUT THE DEPARTMENT

The department of Mechanical Engineering in The Oxford College of Engineering is a flagship department of the college. The department was started in the year 2002, and since then the department has been buzzing with activities viz., seminars, workshops, technical quiz, invited guest lectures, industrial visits, conferences etc., that enhance the employability of our students. The faculties of the department are cherry-picked and they are experts in their own field. The students admitted in the department are well trained both theoretically and practically to face the real world. Industry internship has been made compulsory for all the students. At the end of four years of study, the students are made industry-ready to take the bull by the horn. Also, many graduates from the department have acquired higher degrees from reputed universities at abroad. The alumni of the department are spread all over the world contributing significantly for the well-fare of the humanity. The students of the department have brought laurels to the institution by winning many medals at the university and state level sports competitions. The students are encouraged to participate in co-curricular activities and competitions.

HOD'S PROFILE

Dr. Madhu Sudana Reddy G

Dr. Madhu Sudana Reddy G working as a professor and Head of the Department in Mechanical Engineering. He has graduated his M. Tech (Materials/ Manufacturing Science) from the M.S. Ramaiah institute of Technology in the year 2008.He has completed his Doctor of Philosophy in the year 2019 on the area of Thermal spray coatings/Composite Materials under the guidance of Dr.M.R. Ramesh, Professor, Dept of Mechanical Engg, NITK Surathkal, Karnataka and Dr. NageswaraRao.T, Director, Gitam University, Bangalore, Karnataka. He has more than 15 years of teaching and 2 years of industrial experience**.** His area of research is on thermal spray coatings, composite materials, PMCs and MMCs. He has several research publications in reputed SCI/Scopus indexed journals. He is the author for the books like Innovation & Design Thinking and Mechatronics Engineering. He is currently working under the Research projectentitled as" "Development of Composite Coatings in Improving Resistance to Corrosion and Erosion for Agricultural Peeling Components using Hybrid Techniques" under SERBScheme. He is

professional member in various professional bodies like Indian society of technical education, Institute of Engineers, Indian institute of Metals, Materials Research society of India, IAEEE, Institute of Research & doctors, and International Association of Engineers. He is currently the BOE member in the Automobile Engineering board, Visvesvaraya Technological University (VTU), Belagavi.

ACADEMIC ACHIEVEMENTS:

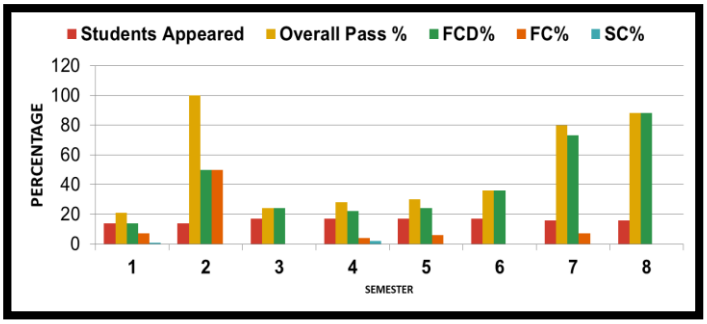
Student Toppers List

PRAJWAL KUMAR (1OX21ME402)

PRASHANTH RANJAN (1OX20ME010)

Performance of passed out batch (2020-2024) students

Semesterwise Performance Analysis of 2020-2024 Batch					
Sem	Students Appeared	Overall Pass %	FCD%	FC%	SC%
1	14	21	14	7	1
2	14	100	50	50	0
3	17	24	24	0	0
4	17	28	22	4	2
5	17	30	24	6	0
6	17	36	36	0	0
7	16	80	73	7	0
8	16	88	88	0	0



Semester wise performance

Student Achievements

1. Mr. Dharma Teja bearing USN of 1OX20ME003, successfully placed in Talentserve with apackage of 12 LPA
2. Mr. Prajwalkumar S M bearing USN of 1OX21ME402, successfully placed in Talentserve with apackage of 5.5 LPA

KSCST PROJECTS

Sl No	Title	Guide Name	Student Name	Amount
1	Design and Fabrication of Wearable System for Real Time Respiratory and Heart Rate Tracking	Dr. Anup M U Dr. Varun K R	Mr. Prashanth R Mr. Dharma Teja Mr. Sandeep J	5500

2	Design and Fabrication of Automated Waste Segregator	Dr. Vidyadhar Pujar	Mr. Nikhil R Ms. C. Nischitha R Mr. Shams Medhi K	5500

DEPARTMENT ACTIVITIES

WORKSHOP / GUEST LECTURE

Date	Topic	Resource Person
01/08/2024	IC Engines Motors and Their Application in Hybrid/Electric vehicles	Mr. Anoop Srinivasan, Technical Director, PABS Consultants
25/11/2023	Start-up synergy- Exploring AI, ML, and Mechanical Entrepreneurial Frontiers	Mr. Aamid, Data Scientist, Mercedes Benz, Founder of Move Life and Ground Zero (Startup)
24/01/2024	Smart Manufacturing: Exploring Innovative Opportunities in Mechanical Engineering	Dr. Shivanna D M, CEO, ARRKS INOVTECH Pvt Ltd, Bangalore
19/02/2024	Startup Pathways: Navigating Placement Opportunities for Career Success	Saravan Kumar B M, IPCS Global Pvt Ltd, India Bangalore
09/11/2023	Opti Press: Innovating the Future of Pressure Sensing with Light	Dr. Yashaswini P R, Faculty, EC Department, Malnad College of Engineering, Hassan
23/11/2023	Mech Design Mastery: Crafting Excellence in Product Innovation	Mr. Kushal, Quality Engineer, Rotary Electronics Pvt Ltd, Bangalore
02/02/2024	Innovative Interfaces: Mastering Design Software in Product Development	Mr. Naveen Jaishwal, Associate Engineer, Alten India Pvt Ltd, Bangalore
09/05/2024	Revolutionizing Innovation: A Dive into Product Development with Creo Parametric	Mr. Amaresh Prabhuswamy, Technical Engineer, Sumedhas Tech Solutions Pvt Ltd, Bangalore
14/05/2024	Innovate with SolidWorks: Design Thinking Strategies for Engineering Success	Mr. Arnav Raj, Design Engineer, CADD Centre
07/03/2024	Pixels to Plastic: Unleashing Innovation with 3D Printing	Ms. Nitya, Assistant Manager, RP3D Product LLP
24/01/2024	Smart Manufacturing: Exploring Innovative Opportunities in Mechanical Engineering	Dr. Shivanna D M, CEO, ARRKS INOVTECH Pvt Ltd, Bangalore
12/12/2023	Advanced Machine Learning and its application in mechanical engineering	Mr. SachinShivakalimath ,Associate Engineer, Del India Pvt Ltd
19/06/2024	Scope and Opportunities in HVAC for Air Conditioning Design	Mrs Farheen, CEO, Prinston Smart Engineers
21/06/2024	Smart materials and its application in mechanical engineering	Dr. Shivanna, CEO, Greentronics Pvt Ltd

Industrial Interactions

The Department of Mechanical Engineering organized “Field/Exposure Visit to Incubation Pre Incubation Unit such as Idea Lab, Fab Lab, Market Space, Design Centers, City MSME Clusters, Workshops etc.” to VSSC Space Museum HAL, Bangalore, on 21st February 2024.

Industrial Visit to VSSC Space Museum HAL, Bengaluru

Outreach Activities

Date	Topic	Location
01/08/204	Innovation & Entrepreneurship	BGS National Public School, Bangalore
02/02/2024	Awareness for Empowering Vulnerable Children	Raksha educational and charitable trust, Bangalore
25/09/2023	Awareness of Old Age Care	Prahsant Charitable Trust, Bommanahalli

Outreach Activities

FACULTY ACHIEVEMENTS

Faculty Publications

1. Dr. Ravipakash M, “Microstructure, mechanical and wear properties of SiC and Mo reinforced NiCr microwave cladding, Advances in Materials and Processing Technologies” Taylors and Francis Scopus, https://www.tandfonline.com/doi/abs/10.1080/2374068X.2023.2257937
2. Dr. Vidyadhar Pujar, “Enhanced Thermal Properties of TiC Nano-Powders Through Deep CryogenicTreatment”, https://jnanoworld.com/articles/v9s3/nwj-s3-hemlata-ganvir.pdf
3. Dr. Varun K R, “Investigation of Mechanical and Metallurgical Properties of Friction Welded Joints forDissimilar Metals (HSS M2 and EN8 Steel”, Springer, Scopus, https://link.springer.com/article/10.1007/s40033-024-00658-z
4. Dr. Varun K R, “Elevated Temperature Stress Analysis of Cobalt-Based Composite Cladding byMicrowave Process on Gas Turbine Rotor Blade Using FEA”, Springer, https://link.springer.com/article/10.1007/s40033-024-00691-y
5. Dr. Anup M Upadhyaya, "Design of Two-Dimensional Photonic Crystal Defect Microcavity Sensor for Biosensing Application". Silicon 15, 5503–5511 (2023). https://doi.org/10.1007/s12633-023-02448-w.
6. Dr. Anup M Upadhyaya, "Optofluidic photonic crystal micro sensor for enhanced detection of infectious diseases", IOP Science, https://iopscience.iop.org/article/10.1088/2631-8695/ad16a3/meta.
7. Dr. Anup, "Design and analysis of a fiber Bragg grating-based foot pressure assessment system", Scopus,SCIE, https://onlinelibrary.wiley.com/doi/abs/10.1002/jbio.202400070.
8. Dr. Madhu Sudana Reddy G, "High temperature erosion performance of NiCrAlY/Cr2O3/YSZ plasma spray coatings. Transactions of the IMF, 101(5), 245–251. https://doi.org/10.1080/00202967.2023.2208899.
9. Dr. Madhu Sudana Reddy G "Investigation of High-Temperature Erosion Behavior of NiCrAlY/TiO_2 Plasma Coatings on Titanium Substrate", 3317–3323 (2023) Journal of Materials, https://doi.org/10.1007/s11837-023-05894-4.

FDP Attended by Faculties

1.Dr. Madhu Sudana Reddy G, Dr. Ravi Prakash M, Mr. Raghavendra N, Dr. Varun K R, Dr. Anup M Upadhyaya had attended an FDP on “Advances in Material Technology for Next Generation Manufacturing” in the year 2024.
2. Dr. Madhu Sudana Reddy G, Dr. Ravi Prakash M, Dr. Vidyadhar Pujar, Dr. Varun K R, had attended an offline training in "Advanced Pedagogical Skills, Design Thinking and Training of Training of Trainers for 21st Century Soft Skills" in the year 2023.
3. Dr. Ravi Prakash M and Dr. Varun K R, had attended an FDP on “Principles of Metal Forming Technology” in the year 2023.
4. Dr. Vidyadhar Pujar had attended an FDP on “Robotics and Automation” in the year 2023.
5. Dr. Vidyadhar Pujar had attended an FDP on “Recent Developments in Mechanical Engineering” in the year 2023.

NPTEL courses

Dr. Raviprakash M and Dr. Varun K R, had completed the NPTEL course on “Principle of Metal Forming” during July-Sep 2023

VTU supervisors

Dr. Raviprakash M, Dr. Prasad H Nayak and Dr. Varun K R, has successfully recognized as Research Supervisor in the year 2023-2024 under VTU, Belgaum.

Patent Publications

Sl No	Name of the Faculty	Title	Year
1	Dr. Anup M Upadhyaya	Mechanical Bite Measuring Device	2024
2	Dr. Anup M Upadhyaya	Human Occlusion Force Measuring Device for orthodontic diagnosis	2024
3	Dr. Anup M Upadhyaya	Design of multipurpose measuring device for upper extremity based on optics	2024
4	Dr. Vidyadhar Pujar	Development of TI-C Particulate Reinforced AL-2219 Composites	2023
5	Dr. Vidyadhar Pujar	Closed Loop Pulsating Heat Pipes with Brine Solution to Enhance Thermal	2024

Book Publications

Sl No	Name of the Faculty	Title	Name of the Publisher	Year
1	Dr. Anup M Upadhyaya	Fundamental Concept of Biosensor	Apple Academic Press	2024

Conference proceedings

Sl No	Name of the Faculty	Title	Name of the Conference	Year
1	Dr. Vidyadhar Pujar	“Study of Wear behaviour and worn out surface of AL6063 Zirconium Particulate composite”	Recent Advances in Material science in Engineering (RAME-2023)”	2023
2	Dr. Anup M Upadhyaya	"Design and Development of Plantar Pressure Measurement Device Using Optical Sensor"	IEEE Photonic Conference, Orlando, USA	2023

Research and Development Activities

Funds Received

Sl. No	Project Title	Funding Agency	Amount Sanctioned	Project Coordinators
1	Biting Force Recording Device for Clinical Evaluation of Dental Problems	VGST- RGSF	3,00,000	Dr. Anup M Upadhyaya
2	“Development of Composite Coatings in Improving Resistance to Corrosion and Erosion for Agricultural Peeling Components using Hybrid Techniques”	SERB	28,63,696	Dr Madhu Sudana Reddy G (CO-PI) Dr Durga Prasad C (PI)