

DEPARTMENT OF MECHANICAL ENGINEERING

EVEN SEMESTER NEWS LETTER

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SHRI MADHWA VADIRAJA INSTITUTE
OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Bantakal - 574 115



MESSAGE FROM THE HOD'S DESK



I hope this message finds you well. I wanted to take this opportunity to share some exciting updates from the Department of Mechanical Engineering at SMVITM, Bantakal. Over the past year, our department has achieved significant milestones in both academic excellence and research innovation. Our faculty members have continued to excel in their fields, contributing to groundbreaking research projects and publications. Our students have shown commendable performance in various competitions and have been actively involved in industry collaborations. Looking ahead, we are committed to further enhancing our curriculum to align with the latest industry trends and technological advancements. We aim to provide our students with a holistic learning

experience that prepares them to tackle real-world challenges with confidence and expertise. I encourage all of you to continue striving for excellence in your respective roles. Together, let us uphold the department's reputation for academic rigor and innovation.

Dr. Raja Yateesh Yadav

ABOUT THE DEPARTMENT



The Department of Mechanical Engineering at SMVITM started functioning in the year 2010. The student intake capacity of the Department is 30. Teaching and learning activities at the Department are designed in such a way as to stimulate intellectual curiosity, creativity and innovation in students. The Department has a well qualified and experienced team of faculty members who have their specializations in the different branches/areas of mechanical engineering. The highly committed faculty with their innovative ideas guides the students with their projects and industry assignments. The efforts of faculty, well experienced supporting staff, enabling learning environment and availability of modern facilities are reflected in the excellent performance of the students. Efforts are underway to set up a Research & Development centre to initiate the research activities at the Department.

The Department frequently conducts theoretical and practical technical sessions, industrial visits for the benefit of the students and faculty under the ISTE Students' and Faculty Chapters. These Chapters are actively involved in conducting technical talks and guest lectures by eminent personalities from the industry and academicians from reputed institutes like IISc., IITs and NITs. The Student Chapter is active in organizing career guidance programs, student talent search programs, seminars, workshops, etc. as co-curricular activities throughout the semesters.

DEPARTMENTAL ACTIVITIES

SI No	Event details	In association with, if any	Date(s) of event	Resource person(s)	Target Audience, if any
1	Alumni talk on "Career Opportunities for Mechanical Engineering in Merchant Navy"	Alumni cell of the Institute	12 February 2024	Mr. Ashish H Prabhu, Marine Engineer, Anglo Eastern Shipping Company	Second, third and final year ME students
2	Invited talk on "Innovation and Entrepreneurial Opportunities in 3D printing"	Department of ECE, Civil Engineering, ISTE Student Chapter, ED Cell and Institution's Innovation council	15 February 2024	Dr. Vijeesh V, Associate Director (R&D), NITTE Off-Campus Centre, NMAMIT, Nitte	Students of Mechanical, Civil and Electronics and Communication Engineering
3	Value Added Program on "CAD tools"	ISTE student chapter	29, 30 and 31 January 2024	Mr. Guruprasanna K, Senior CAD Trainer	2nd and 3rd year students of Mechanical Engineering
4	Workshop on "Making of Resume and LinkedIn Profile"	Civil Engineering and Training and Placement Cell of SMVITM	17 January 2024	Dr. C K Manjunath, Head, Training and Placement Cell, SMVITM, Bantakal	Students of Mechanical and Civil Engineering Department
5	Alumni talk on "Opportunities for Higher Education in Abroad for Mechanical Engineers"	Alumni cell of the institute	5 May 2024	Mr. Prathviraj Upadhyaya, Ph.D Research Scholar, SEAM Research Centre, Ireland	Students of Mechanical Engineering
6	Invited talk on "Linkages between Technology and Geopolitics"	ISTE student chapter	17 May 2024	Dr. Anand V, Assistant Professor (Sr. Scale), Department of Geopolitics & International Relations, MAHE, Manipal	Students of Mechanical and Civil Engineering and various branches of 1st year Engineering
7	Invited talk on "Mechanical Product Development Process"	ISTE student chapter and Institution's Innovation Council	21 June 2024	Dr. Arunkant Bhat Senior Engineer, Westinghouse Airbrake Technologies, South Carolina, USA	Students of 1st, 2nd and 3rd year Mechanical Engineering
8	Industrial Visit to Various laboratories at Centre for System Design, NITK, Surathkal	Entrepreneurship Development Cell (EDC) and ISTE Student Chapter	5 July 2024	Dr. K V Gangadharan, Professor, Department of Mechanical Engineering, Centre for System Design, NITK, Surathkal	2nd and 3rd year students of Mechanical Engineering

"Career Opportunities for Mechanical Engineering in Merchant Navy"



Our alumnus of 2015-2019 batch Mr. Ashish H Prabhu, currently working as Marine Engineer, Anglo Eastern was the resource person of the program.

In his address, he briefed about the career opportunities for mechanical engineering graduates in merchant navy. Mr. Ashish has thrown light on the following aspects in his address.

- * How to get into shipping companies?
- * Job profile, roles and responsibilities of a marine engineer.
- * Incentives and facilities provided by the shipping companies to their employees.
- * Challenges faced by the marine engineers while sailing.
- * Institutes providing good training and placements in merchant navy.

Mission of the Department

- * Develop transformative leaders in the field of mechanical engineering with an ability to work in a multi-disciplinary environment to fulfil the social requirements.
- * Give students a platform and an academic environment that will ensure the transfer of knowledge and skills.
- * Nurture the students' overall personality development through initiatives with high credibility, social effect and sustainability.

"Innovation and Entrepreneurial Opportunities in 3D printing"

Dr. Vijeesh V, Associate Director (R&D), NITTE Off-Campus Centre, NMAMIT, Nitte was the resource person of the program. The resource person in his address highlighted the following points.

- ♦ Interesting innovations came out across the world.
- ♦ Need for innovation
- ♦ Research activities at NITTE Off-Campus R & D Centre
- ♦ Additive manufacturing & 3D printing basics
- ♦ Ideas for student project works in 3D printing
- ♦ Applications of 3D printing in Medical/Dental Sciences
- ♦ Facilities available at NITTE Off-Campus R & D Centre
- ♦ Start-up opportunities in the area of additive manufacturing and 3D printing



Linkages between Technology and Geopolitics



Dr. Anand V, Assistant Professor (Sr. Scale), Department of Geopolitics & International Relations, MAHE, Manipal was the resource person of the program. The resource person in his address highlighted the following points.

- ▣ Meaning of Geopolitics
- ▣ Meaning of Space in terms of Geopolitics
- ▣ Evolution of Geopolitics
- ▣ International relations
- ▣ Relationship between Cinema industry and Geopolitics
- ▣ Geopolitical dimensions of Science and Technology
- ▣ Science & Technology in foreign policy
- ▣ Industrial revolution and the world order
- ▣ Impact of Science and Technology trends on Geopolitics.

Mechanical Product Development Process

Dr. Arunkant Bhat, Senior Engineer, Westinghouse Airbrake Technologies, South Carolina, US, was the resource person of the program. The resource person in his address highlighted the following points.

- ♦ Mechanical systems and their integration with respect to automotive industry
- ♦ Parts of an automobile system
- ♦ Designing systems and sub-systems
- ♦ Stages in the designing of an automotive systems (Tollgate process)
- ♦ Scope of design, Review of prior designs
- ♦ Trade studies: Trade-off analysis
- ♦ Importance of Risk Priority Number (RPN)



Vision of the Department

"To be recognized as a center of eminence in mechanical engineering for research on modern technologies and comprehensive engineering education"

FACULTY ACHIEVEMENTS

SI No	Name of faculty member with designation	Achievement	Date
1	Dr. Raja Yateesh Yadav, Associate Professor and Head	Recognized as research supervisor Under VTU, Belagavi	24 June 2024
2	Dr. Madhukara Nayak, Assistant Professor (Selection Grade)		
3	Dr. Bharath K Bhat, Assistant Professor (Selection Grade)		

FACULTY PAPER PUBLICATIONS (NATIONAL/INTERNATIONAL JOURNALS)

SI No	Name of faculty member with designation	Publication details	Publication period
1	Mr. Aditya Kudva S, Assistant Professor (Selection Grade)	"Enhancing surface characteristics of Mg-Zn-Sr alloy through cryo-ball burnishing; modeling and experimentation", in Journal of Mechanical Science and Technology, Volume 38, Issue 3, DOI 10.1007/s12206-024-0214-x, pp:1175-1185.(Scopus, Q2)	March 2024
2	Dr. Thirumaleshwara Bhat, Principal, Professor	"Influence of Hydrogen Enhancement on Diesel Engine Fueled with Simarouba Glauca DC Biodiesel with- Aqueous Al ₂ O ₃ Blends", in YMER, ISSN : 0044-0477, Volume 23, Issue 4, http://ymerdigital.com , pp:489-506. (Scopus, Q4)	April 2024

FACULTY PAPER PRESENTATION & PUBLICATIONS IN CONFERENCE PROCEEDINGS

SI No	Name of faculty member with designation	Publication details	Publication period
1	Dr. Manjunatha S, Assistant Professor (Selection Grade)	"A study on Emission and performance characteristics of IDI diesel engine using Methanol and Ethanol Biodiesel Blends" in the Two Day 3rd international Conference on Recent Trends in Mechanical Engineering Sciences (RTIMES-2024)", held at Srinivas Institute of Technology, Mangaluru	10 and 11 May 2024
2	Dr. Raja Yateesh Yadav, HoD, Associate Professor	"A study on Emission and performance characteristics of IDI diesel engine using Methanol and Ethanol Biodiesel Blends" in the Two Day 3rd international Conference on Recent Trends in Mechanical Engineering Sciences (RTIMES-2024)", held at Srinivas Institute of Technology, Mangaluru	10 and 11 May 2024

ONLINE/OFFLINE COURSES ATTENDED/COMPLETED BY FACULTY AND STAFF

SI No	Name of faculty member with designation	Online/Offline Courses attended	Date/Period of event
1	Dr. Bharath K Bhat, Assistant Professor (Selection Grade)	NPTEL Online Course Certificate for successfully completed the course "Effective Engineering Teaching in Practice" with a consolidated Score of 66% (Roll No: NPTEL24GE13S547800005). Indian Institute of Technology, Madras	January to February 2024
2	Mr. Karthik V, Assistant Professor (Sr.)	NPTEL Online Course on "Computer Integrated Manufacturing" with a consolidated Score of 86% and bagged Silver Badge. (Roll No: NPTEL24ME27S669400075). Indian Institute of Technology, Kanpur	January to April 2024
3	Dr. Raja Yateesh Yadav, HoD, Associate Professor	NPTEL Online Course Certificate for successfully completed the course "Cooling Technology: Why and How Utilized in Food Processing and Allied Industries" with a consolidated Score of 75% and bagged Silver Badge. (Roll No: NPTEL24AG01S969400044). Indian Institute of Technology, Kharagpur	
4	Dr. Sudarshan Rao K, Dean (QA), Professor	22 Days Online Course on 'How to Face Peer Team Visits and SSS	19 March to 09 April 2024

WORKSHOPS/FDP/SEMINAR/TRAINING PROGRAM WEBINAR ATTENDED/COMPLETED

SI No	Name of faculty member with designation	Workshops / FDP / Seminar/ Training Program/ Webinar details	Date/Period of event
1	Mr. Ananth Mohan Mallya, Assistant Professor (Sr.)	Five Days Online Faculty Development Programme on "Design for Manufacturing & Advanced Automation for Industry 4" organised by school of Mechanical Engineering, Reva University in association with AUTODESK	16 to 20 January 2024
2	Mr. Aditya Kudva S, Assistant Professor (Selection Grade)	Five Days online Faculty Development program on "Advances in Materials Technology for Next Generation Manufacturing" at Ballari Institute of Techology and Management, Ballari	01 to 05 February 2024
3	Mr. Karthik V, Assistant Professor (Sr.)	1½ Week NPTEL- AICTE Online FDP on "Computer Integrated Manufacturing" with a consolidated score of 86% (Roll No: NPTEL24ME27S669400075)	January to April 2024
4	Dr. Raja Yateesh Yadav, HoD, Associate Professor	1½ Week NPTEL- AICTE Online FDP on "Cooling Technology: Why and How Utilized in Food Processing and Allied Industries" with a consolidated score of 75% (Roll No: NPTEL24AG01S969400044)	
5	Dr. Bharath K Bhat, Assistant Professor (Selection Grade)	Day National Workshop on "Unleashing innovations for and from Grass Roots" at NITK, Surathkal	24 February 2024
6		Two Days Workshop on "Introduction to Refrigeration and Air-Conditioning", at Manipal Skill Development Centre, Manipal.	12 and 13 April 2024

PATENTS APPLIED/RECEIVED

SI No	Name of inventor(s)	Title with date	Patent Application No	Patent Status
1	Dr. Raja Yateesh Yadav, HoD, Associate Professor	Natural Aspirated Domestic Radiant Porous LPG Burner, 22 March 2024	202441015988 A	Published

FINAL YEAR PROJECT DETAILS

Project Batch	USN	Name of the student	Project Title	Name of the Project Guide
1	4MW20ME002	Ankith Suvarna	Investigation of Microstructure, Mechanical Properties and Corrosion Behavior of MDFed Mg-Zn-Zr Alloy	Mr. Aditya Kudva S
	4MW20ME005	Karthik R Moolya		
	4MW20ME011	Sudeep N R		
2	4MW20ME006	Manjunath Sanjeevappa Baradeli	Development of Mg-Zn-Ca Alloy for Orthopedic Implant Application Through MDF	Mr. Sudhir
	4MW20ME009	Saurabh S Acharya		
	4MW20ME010	Shodhan Shetty		
3	4MW18ME029	Shreeram Bharadwaj	Design and Development of a Tree Climber	Mr. Karthik V
	4MW20ME001	Abishek D		
	4MW20ME007	Mohammed Athiq		
4	4MW20ME003	Anshuman	Design & Fabrication of Portable Domestic Rice Mill with Destoner	Mr. Ananth Mohan Mallya
	4MW20ME004	K N Shreesha Achar		
	4MW20ME008	Rohan U Palan		
	4MW20ME012	Vikram		

Three days Value Added Program on "CAD tools"



The Department of Mechanical Engineering in association with ISTE student chapter has organized three days of Value Added Program on "CAD tools" for the benefit of 2nd and 3rd year students of Mechanical Engineering on 29, 30 and 31 January 2024. Mr. Guruprasanna K, Senior CAD trainer with vast industrial experience was the resource person of the program. The resource person in his three days of the sessions, explained in detail regarding 2D and 3D modeling using AutoCAD, Solid Edge, Solid Works and AutoDesk Fusion

360. Hands-on sessions have held and the students have exposed to modeling techniques and various commands used in above said CAD packages. Also, the resource person briefed the students regarding Geometric Dimensioning & Tolerance (GD & T). The resource person has distributed the certificates to the students on successful completion of the program. Dr. Bharath K Bhat from the Department of Mechanical Engineering was the coordinator of the program.

Visit to VR, EV and UAV labs at CSD, NITK, Surathkal

Entrepreneurship Development Cell (EDC) and ISTE student chapter of the institute organized a visit to various research laboratories at Centre for System Design, National Institute of Technology Karnataka, Surathkal on 05 July 2024 for the benefit of 4th and 6th semester students of Mechanical Engineering.

In the morning session, Ms. Shreshta Udipi, Senior Research Fellow at Centre for System Design, NITK conducted a session on "Introduction to Virtual Labs". She briefed regarding how to conduct experiments using virtual labs. Also given information regarding Real Time Labs. Later, she conducted hands on session on conduction of materials testing and fluid mechanics experiments using virtual labs.

Dr. Pruthviraj U briefed the students regarding various research activities going on at Centre for System Design, NITK. This session was followed by visit to Virtual Reality, Electric Vehicle and Unmanned Aerial Vehicle laboratories.



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(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)

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