Karunya
DEEMED UNIVERSITY
SOLVING HUMAN PROBLEMS

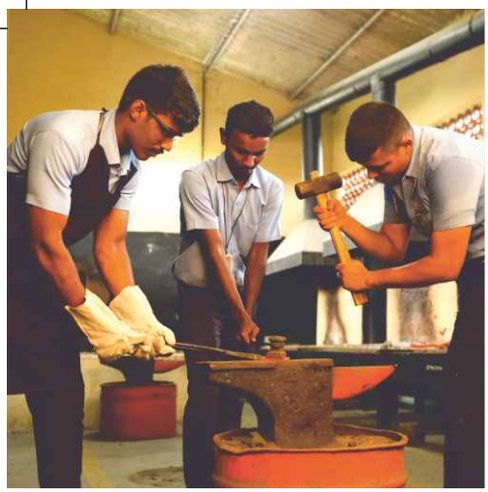
# Admissions 2020

## Department of MECHANICAL ENGINEERING

### M.Tech in ADVANCED MANUFACTURING TECHNOLOGY

## About Us

Accredited by the National Board of Accreditation (NBA) in 2018, the Department is known for excellence in academics and research in the fields of design & manufacturing engineering, material sciences & thermal management, renewable energy, metallurgy and mechatronics. The department trains students to develop technical skills, innovate products, file patents and acquire leadership qualities for successful careers in product design, research and entrepreneurship. M.Tech – Advanced Manufacturing Technology (AMT) is a post graduate engineering programme offered by the Department of Mechanical Engineering in collaboration with Central Manufacturing Technology Institute (CMTI), Bangalore. The curriculum of M.Tech - AMT has been enriched by incorporating the latest technologies such as Artificial Intelligence, Machine Learning, Data Analytics, Robotics and Automation, 3D Printing and Smart materials. In addition, the students are trained in the latest phase of industrial revolution focusing on interconnectivity, automation and capturing real-time data (Industry 4.0).



## Research Lab Facilities

The department has well equipped research laboratories for hands-on training in design, manufacturing, thermal and materials engineering.

Measurement of cutting force Measurement of Surface roughness Measurement of cutting temperature

- CNC Turning centre
- CNC Vertical Machining Centre
- Automatic Precision Grinding Machine
- Stir Casting Furnace
- Spark Erosion Machine
- Tool Makers Microscope
- Pin on Disc Wear Tester
- Micro-hardness Tester
- 3D Printing

## Research Centers

The department has four Research Centers with advanced equipment and precise instruments for students to carry out research and innovate new products. The students design, develop, and test their products at the Centers. Heat pipes (heat transfer device) developed for electronic cooling applications in the Center for Research in Materials Science and Thermal Management are on par with industry requirements. Anti-ballistic materials prepared in the Centre for Research in Metallurgy, novel cutting fluid to "cool the tool" developed in the Centre for Research in Design and Manufacturing and the technology for converting biomass waste to energy in the Centre for Research in Renewable Energy, are some of the cutting edge technologies developed in the department.

## Funded Projects & Consultancy

The department generates a significant income through Consultancy projects and testing for various institutions and industries. The research grants provided by the Government funding agencies has contributed to significant research leading to the award of 23 Ph.D Degrees and 69 scholars pursuing their Ph.D Degree. Currently the Department has four ongoing Funded Projects worth 3.62 crores.

## Career Prospects

The department is currently associated with the following core industries - AMZ Automotive, M/s. Trident Pneumatics Pvt. Ltd., and Central Manufacturing Technology Institute (CMTI) that support the department in:

- Offering joint M. Tech., Programs
- Designing Industry Oriented Curriculum
- Providing Internships, In-Plant Trainings
- Industry projects and placements

## Collaborations

MoA's have been signed with the following industries:

- AMZ Automotive, Jaipur
- Trident Pneumatics Private Limited, Cbe.
- Mastro Lee, Cbe.
- Central Manufacturing Technology Institute (CMTI), Bangalore
- CADD Centre, Cbe.

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