

DEPARTMENT OF MECHANICAL ENGINEERING



Institution Vision & Mission

VISION

To impart quality technical education emphasizing innovations and research with social and ethical values.

MISSION

- Establishing state-of-the-art infrastructure, effective procedures for recruitment of competent faculty and innovative teaching practices.
- Creating a conducive environment for nurturing innovative ideas and encouraging research skills.
- Inculcating social and ethical values through co-curricular and extra-curricular activities.

Editorial Student Members

Mr. Mukesh S

Mr.Saran J

Editorial Faculty Members

Mr.P.Prakash

Assistant Professor

December 2020



HOD'S MESSAGE

- Our mission is to nurture future-ready engineers, drive impactful research, and contribute to technological advancements that shape the world.
- Through a blend of academic rigor, hands-on experience, and collaboration with industry leaders, we aim to provide a holistic learning environment. I encourage all students, faculty, and staff to actively engage in this journey of discovery and innovation.
- Together, let's uphold our tradition of excellence and engineer solutions for a sustainable and prosperous future.

DEPARTMENT VISION & MISSION

VISION

- To create innovative, entrepreneurial and socially committed Mechanical Engineers to meet industrial demands.

MISSION

- Developing core competency in Mechanical Engineering through state-of-the-art facilities and effective teaching practices.
- Encouraging and nurturing research potential and promoting entrepreneurial endeavors.
- Instilling social and ethical values through extension activities.



What we know is a **drop**,
what we don't know is an **ocean**.

—Isaac Newton

AZ QUOTES



List of Faculty Members

Dr.P.Manimaran

Professor

Dr.S.Krishnakumar

Professor

Dr.S.Goshteeswaran

Professor

Dr.Pichandi

Associate Professor

Mr.A.Saiyath Ibrahim

Assistant Professor

Mr.S.N.Vijayan

Assistant Professor

Mr.N.Suresh

Assistant Professor

Mr.K.P.Harshavardhan

Assistant Professor

Mr.P.Prakash

Assistant Professor

Mr.R.Ramesh Babu

Assistant Professor

Ms.S.Karthika

Assistant Professor

Mr.T.Gunasekaran

Assistant Professor

Mr.P.Sathishkumar

Assistant Professor

Mr.A.J.Infant Jegan Rakesh

Assistant Professor

Mr.S.Praveendhanapal

Assistant Professor

Mr.B.Manup

Assistant Professor

Mr.M.Pradeep

Assistant Professor

Mr.K.Logeshkumar

Assistant Professor

Mr.S.Rajendran

Assistant Professor



"Knowledge is the key to open any door; keep gathering it."

FACULTY ACHIEVEMENT JOURNAL PUBLICATION

PRINCIPAL

DR.P.MANIMARAN

- A novel palm sheath and sugarcane bagasse fiber based hybrid composites for automotive applications: An experimental approach.
- Characterization of natural cellulosic fibers from Nendran Banana Peduncle plants.
- Characterization of natural cellulosic fibers from Nendran Banana Peduncle plants.



HOD

A. SaiyathIbrahim

- Cladding Of Stainless Steel Over Mild Steel By Using Flux Cored Arc Welding.
- Optimization of Friction Stir Welding Parameters of Aluminium Alloy Using Taguchi Method.



FACULTY ACHIEVEMENT

JOURNAL PUBLICATION

FACULTY

Mr. Vijayan S N



- Effect and optimization of machining parameters on MRR & SR for monel 400 material using Taguchi method.

- A Study on Ballast Water Management System To Reduce Pollution In Oceans Characterization of natural cellulosic fibers from Nendran Banana Peduncle plants.
- Tribological characteristics of powder metallurgy processed Cu- WC/SiC metal matrix composites.

FACULTY

Mr. R. Ramesh Babu



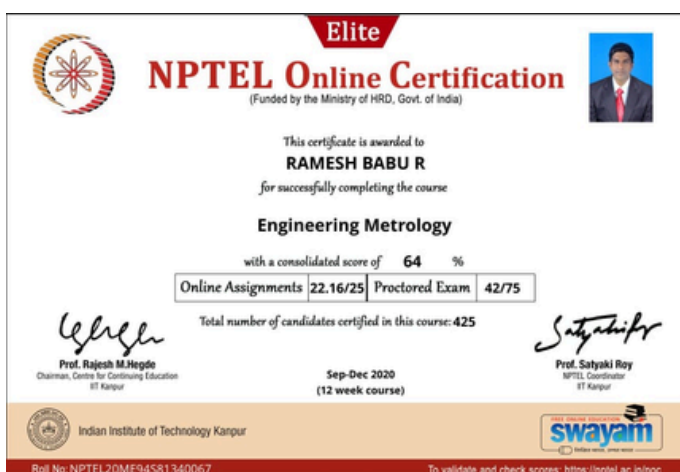
FACULTY ACHIEVEMENT NPT EL



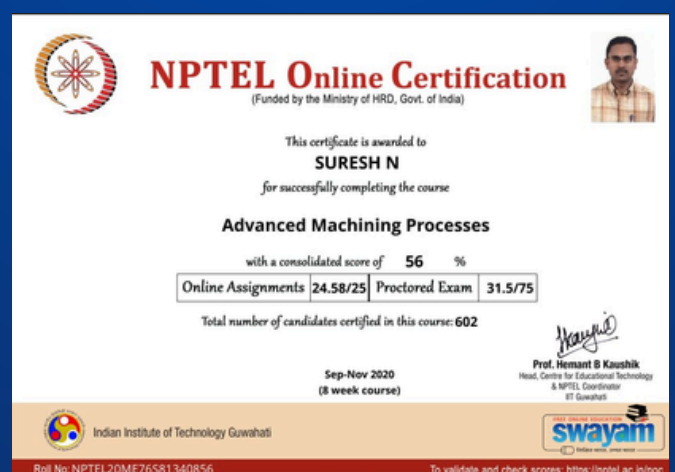
- Mr. S.N. Vijayan successfully completed an 8-week course on Advanced Machining Processes, achieving a commendable score.



- Mr. M. Pradeep excelled in his 8-week course on Advanced Machining Processes with an elite score.



Mr. R. Ramesh Babu also distinguished himself in his 12-week course on Engineering Metrology with an elite score.



- Mr. R. Suresh successfully completed an 8-week course on Advanced Machining Processes, achieving a commendable score.

STUDENT ACHIEVEMENT ALISON

Akash R

Introduction to Four-Stroke and Auxiliary Engines

Ashwin Suresh

Mechanical Measurement Systems for Advanced Measurements

Deeraj Kumar S

Mechanical Measurement Systems for Advanced Measurements

Jeevanandham R

Introduction to Four-Stroke and Auxiliary Engines

Mohana Krishnan D

Mechanical Measurement Systems for Advanced Measurements

Mukesh M

Introduction to Four-Stroke and Auxiliary Engines

Nandhakumar P

Introduction to Four-Stroke and Auxiliary Engines

Pradeep S

Mechanical Measurement Systems for Advanced Measurements

Raj Kumar N

Introduction to Four-Stroke and Auxiliary Engines

Sahayaanthoni A

Diesel Engine Basics

- **Srisanth G**

Mechanical Measurement Systems for Advanced Measurements

- **Syed Thahir Ali S**

Mechanical Measurement Systems for Advanced Measurements

- **Thirumalesha N**

Diesel Engine Basics

- **Venkadesan P**

Mechanical Measurement Systems for Advanced Measurements

- **Vinothkumar C**

Mechanical Measurement Systems for Advanced Measurements

- **Vishnu Narayanan P C**

Mechanical Measurement Systems for Advanced Measurements

- **Yeswanthkumar R**

Introduction to Four-Stroke and Auxiliary Engines

- **Veera Karthick V**

Mechanical Measurement Systems for Advanced Measurements

- **Aswath S**

Introduction to Wind Energy

- **Baskar C**

Introduction to Wind Energy

- **Elbin Y**

Introduction to Wind Energy

- **Gokul R**

Introduction to Wind Energy

- **Gokulan V**

Introduction to Wind Energy

- **Mukesh S**

Introduction to Wind Energy

- **Pugalenthi S**

Introduction to Wind Energy

- **Rajan A**

Introduction to Wind Energy

- **Sethupathi S**

Introduction to Wind Energy

- **Sri Balaji T**

Introduction to Wind Energy

- **Syed Mohamed Kasim A**

Introduction to Wind Energy

- **Thirupathi M**

Introduction to Wind Energy

- **Aravinth K**

Diesel Engine Cycles,
Maintenance, & Control

- **Praveen J**

Diesel Engine Cycles,
Maintenance, & Control

- **Vignesh A**

Diesel Engine Cycles,
Maintenance, & Control

- **Naveen C**

Diesel Engine Cycles,
Maintenance, & Control

- **Sam X**

Introduction to Four-Stroke and
Auxiliary Engines

- **Santhoshkumar M**

Mechanical Measurement
Systems for Advanced
Measurements

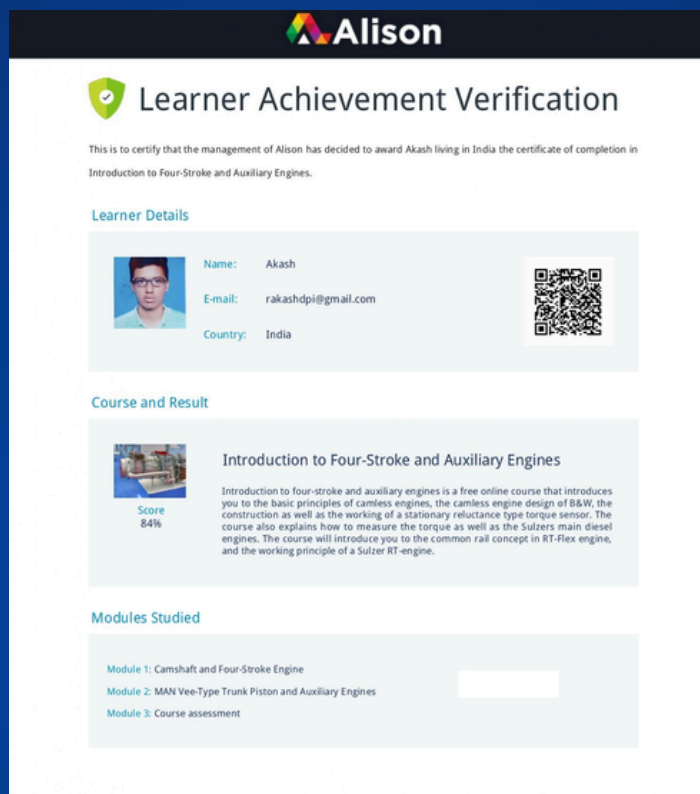
- **Saran J**

Diesel Engine Basics

- **Silambarasan M**

Introduction to Four-Stroke and
Auxiliary Engines

ALISON SAMPLE CERTIFICATE



Alison
Learner Achievement Verification

This is to certify that the management of Alison has decided to award Akash living in India the certificate of completion in Introduction to Four-Stroke and Auxiliary Engines.

Learner Details

Name: Akash
E-mail: rakashdpi@gmail.com
Country: India

Course and Result

Introduction to Four-Stroke and Auxiliary Engines
Introduction to four-stroke and auxiliary engines is a free online course that introduces you to the basic principles of camless engines, the camless engine design of B&W, the construction as well as the working of a stationary reluctance type torque sensor. The course also explains how to measure the torque as well as the Sulzers main diesel engines. The course will introduce you to the common rail concept in RT-Flex engine, and the working principle of a Sulzer RT-engine.

Score: 84%

Modules Studied

Module 1: Camshaft and Four-Stroke Engine
Module 2: MAN Vee-Type Trunk Piston and Auxiliary Engines
Module 3: Course assessment



Alison
Learner Achievement Verification

This is to certify that the management of Alison has decided to award Santhosh Kumar living in India the certificate of completion in Mechanical Measurement Systems for Advanced Measurements.

Learner Details

Name: Santhosh Kumar
E-mail: mssanthoshkumar26@gmail.com
Country: India

Course and Result

Mechanical Measurement Systems for Advanced Measurements
Mechanical Measurement Systems for Advanced Measurements is a free online course that covers the elements, functions and applications of mechanical measurement systems in conducting advanced accurate measurements for pressure, force, torque, displacement, acceleration, soundwaves, thermal conductivity, viscosity, humidity and air pollution. It will equip you with many important instrumentation skills and teach you the general concepts of conducting measurements for those quantities correctly.

Score: 80%
Study Time: 2:32:41

Modules Studied

Module 1: Measuring Force, Displacement, and Sound
Module 2: Thermo-Physical and Air Pollution Sampling Measurement
Module 3: Course assessment

WEBINAR

INSTITUTE OF TECHNOLOGY
Inspiring Innovation

RESOURCE PERSON
Mr. Sanjeevi Manoharan
Junior Controls Designer
NRTC
AUTOMATION
CANADA

DEPARTMENT OF MECHANICAL ENGINEERING

Webinar on
AUTOMATION AND INDUSTRIAL ROBOTS
29-NOV-2020 @ 9 AM

Join in

co-ordinators:
Mr. K P HARSHAVARDHAN (+91 9600819095)
Mr. M. PRADEEP (+91 9003979748)

For Registration

Mr. Sanjeevi Manoharan, Junior Controls Designer, NRTC Automation CANADA has delivered webinar on “Automation and Industrial Robots” for students and faculty Members.

KARPAGAM
INSTITUTE OF TECHNOLOGY
Inspiring Innovation

INTERNATIONAL ENGINEERING COUNCIL
Member of the Institution of Engineers

WEBINAR on
Engineering opportunities and challenges in offshore wind turbine technology

RESOURCE PERSON
Mr. THIYAGARAJAN DEVENDRAN
Senior Structural Engineer
McDermott International Inc,
Dubai, UAE

FOR REGISTRATION USE

DATE :
03-10-2020
TIME:3PM-4PM

Join in **GOOGLE MEET**

Co-ordinators
Mr. T.Gunasekaran, AP/MECH
Mr. K.P.Harshavardhan, AP/MECH

Queries
 +91-9600819095
www.karpagamtech.ac.in

The webinar "Engineering Opportunities and Challenges in Offshore Wind Turbine Technology" was held on 03.10.2020 (Saturday) via Google Meet from 3:00 PM to 4:00 PM, coordinated by **Mr. T. Gunasekaran (AP/Mech)** and **Mr. K.P. Harshavardhan (AP/Mech)**, with **Mr. Thiyagarajan Devendran** as the resource person.

KARPAGAM
INSTITUTE OF TECHNOLOGY
Inspiring Innovation

A WEBINAR on

AN OVERVIEW OF CFD AND ITS APPLICATIONS

08 AUG 2020
@ 10:00 TO 12:00 AM

Resource Person

Mr.R.Y.Sudhir
CFD Engineer
Faurecia Clean Mobility
Bangalore R&D Centre.

DEPARTMENT OF MECHANICAL ENGINEERING

CALL FOR QUERIES :
+91-9600819095

FOR REGISTRATION USE

LST Bypass road, Colimbatore,
Tamilnadu-641 105. www.karpagamtech.ac.in

Certificates will be provided for first 100 participants.

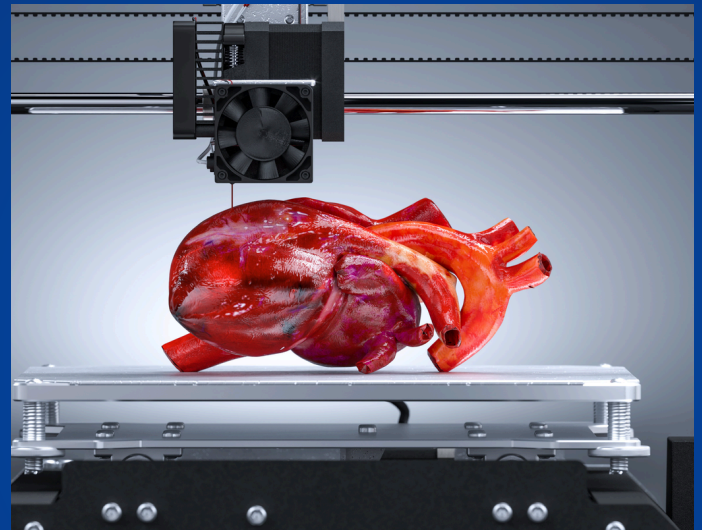
JOIN IN **GOOGLE MEET APP**

The webinar "An Overview of CFD and its Applications" was held on 08.08.2020 via Google Meet, coordinated by **Mr. K.P. Harshavardhan** and **Mr. R. Ramesh Babu**, with **Mr. R.Y. Sudhir**, CFD Engineer at Faurecia Clean Mobility, as the resource person.

3D Printing

- 3D printing or additive manufacturing is the construction of a three-dimensional object from a CAD model or a digital 3D model. It can be done in a variety of processes in which material is deposited, joined or solidified under computer control, with material being added together (such as plastics, liquids or powder grains being fused), typically layer by layer.
- In the 1980s, 3D printing techniques were considered suitable only for the production of functional or aesthetic prototypes, and a more appropriate term for it at the time was rapid prototyping. As of 2019, the precision, repeatability, and material range of 3D printing have increased to the point that some 3D printing processes are considered viable as an industrial-production technology, whereby the term additive manufacturing can be used synonymously with 3D printing. One of the key advantages of 3D printing is the ability to produce very complex shapes or geometries

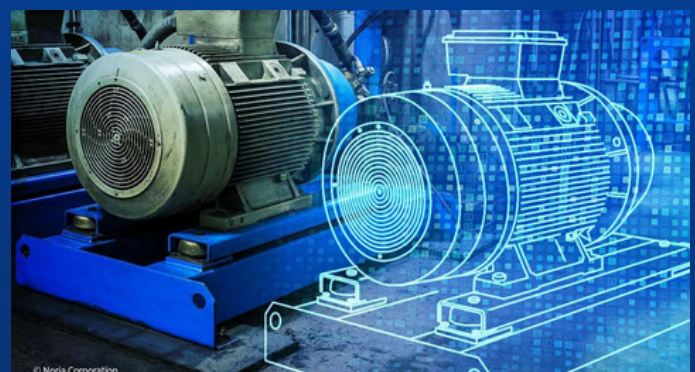
that would be otherwise infeasible to construct by hand, including hollow parts or parts with internal truss structures to reduce weight. **Fused deposition modeling (FDM)**, which uses a continuous filament of a thermoplastic material, is the most common 3D printing process in use as of 2020.



Digital Twin

A digital twin is a virtual model designed to accurately reflect a physical object. The object being studied – for example, a wind turbine – is outfitted with various sensors related to vital areas of functionality. These sensors produce data about different aspects of the physical object's performance, such as energy output, temperature, weather conditions and more. This data is then relayed to a processing system and applied to the digital copy.

Once informed with such data, the virtual model can be used to run simulations, study performance issues and generate possible improvements, all with the goal of generating valuable insights – which can then be applied back to the original physical object.



III Year Mechanical Engineering
ASHWIN SURESH
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