

Important Dates

Prospective participants are requested to register for through the following link.

Link for registration:

<https://events.vit.ac.in/>

Last date for registration: Sept. 3rd, 2023

Registration Fee: Rs 1000/- (inclusive of GST)

Modules to be covered

- Simulation in manufacturing: Introduction to manufacturing: Recent advancements in manufacturing, Classification, Importance of simulation in manufacturing, Simulation Tools used in manufacturing.
- Simulation aspects in machining: FE Model development, Meshing, Element selection, Loading and boundary conditions for machining simulation, Thermal analysis in machining, Case studies, Demonstration
- Simulation aspects in metal forming: Introduction to metal forming, Bulk metal and sheet metal forming, Uni-axial deformation simulation, Incremental forming simulation. Simulation in Limit dome height, Ring rolling, tube drawing processes, Demonstration
- Welding Simulation: Introduction to welding simulation, Tools used for welding simulation, Boundary conditions and material properties selection, Pre and post processing, Weld pool simulation.
- Thermal analysis and distortion simulation in welding: Heat flow in welding, Weld thermal cycle, Temperature measurement in welding, Thermal analysis of welding, Thermo-Mechanical analysis, Distortion in weld joints, Prediction of distortion in welding.
- Role of residual stresses: Residual stresses, Types of residual stresses, Significance of residual stresses, Residual stress formation mechanism, Measurement methods. Residual stresses in various manufacturing processes, Simulation of residual stresses
- Contemporary discussion: Case studies and demonstration

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Dr. G. Viswanathan, Chancellor

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Dr. Devendranath Ramkumar K

Dean-SMEC, VIT, Vellore

Co - Convenors

Dr. Pandivelan C

HOD, Manufacturing Engineering, SMEC, VIT, India

Dr. Asokan M. A

HOD, Thermal & Energy Engineering, SMEC, VIT, India

Dr. Benedict Thomas

HOD, Design & Automation, SMEC, VIT, India

Dr. Ashok B

HOD, Automotive Engineering, SMEC, VIT, India

Coordinators

Dr. Jambeswar Sahu +91-9937583191,

jambeswar.sahu@vit.ac.in

Dr. Ashish Kumar Saxena, +91-7498702083,

ashishkumar@vit.ac.in

Dr. Anoj Giri. +91-7417642987,

anoj.giri@vit.ac.in



VIT[®]
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

Value added course on

Modelling and Simulation in Manufacturing

September 04-15, 2023
Online Platform: MS Team

Resource Persons

Dr. M.M. Mahapatra, IIT Bhubaneswar

Dr. Pankaj Viswas, IIT Guwahati

Dr. Nipal Deka, IIT Jodhpur

Dr. Yogesh G, TCS, Bangalore

Dr. Sagar Telrandhe, Schlumberger Limited (SLB)

Dr. Marrapu Bhargav, NIT Warangal

Dr. Oomar, TVS Chennai

Dr. Jitesh Vasavada, Tvarit, Pune

Dr. Soumya, IIT Bombay

Dr. Jeet Patil, Pillai College of Engineering, Mumbai

Dr. Chinmay Mohanty, VIT Vellore

Dr. Vivek Kumar Barnwal, VIT Vellore

Dr. Anoj Giri, VIT Vellore

Dr. Jambeswar Sahu, VIT Vellore

Organized by

School of Mechanical Engineering
VIT, Vellore -632 014

About the Vellore Institute of Technology

Vellore Institute of Technology was founded in 1984 as Vellore Engineering College by the Founder and Chancellor Dr. G.Viswanathan. University status was conferred in 2001 by MHRD Govt. of India in recognition of its excellence in academics, research and extracurricular initiatives.

Ranking & Accreditation

Vellore Institute of Technology (VIT) has emerged as one of the best institutes of India and is aspiring to become a global leader. Quality in teaching-learning, research and innovation makes VIT unique.

- ❖ Engineering and Technology subject areas of VIT are the 240th best in the World and the 9th best in India, 8 subjects of VIT are within the top 500 in the world (as per QS World University Rankings by Subject 2023).
- ❖ NAAC Accreditation with A++ grade in the 4th cycle.
- ❖ Ranked among the top 601 - 700 Universities of the world and one among the Top 3 institutions in India (Shanghai ARWU Ranking 2022).
- ❖ The 8th best University, the 11th best Research institution and the 11th best Engineering institution in India (NIRF Ranking, Govt. of India 2023).
- ❖ Ranked within the top 200 in Asia (QS - Asia University Rankings 2023).



School of Mechanical Engineering (SMEC)

The School of Mechanical Engineering is one of the oldest and most prestigious schools of VIT. This school started functioning right from 1984, the year in which our institution began. The School of Mechanical Engineering offers 3 undergraduate and 6 post-graduate programs. The school has a team of highly qualified faculty members, many holding PhDs from elite institutes across the globe, to teach and train this country's best minds. The pride of the school lies in the significant research funding received from several National and International agencies such as DST, DRDO, MNRE, CSIT, CVRDE, CPDO, IE, AR&DB, BRNS, ISRO, UGC, NRB, Royal Academy of Engineering etc.

The Department of Science and Technology, Govt. of India has recognized the school for its research activities and supported it in 2003, 2010 and 2022 under the FIST scheme. The school has modern facilities, enabling cutting-edge research in a wide spectrum of niche technological areas. Mechanical and Manufacturing Engineering is ranked within the top 10 in India and top 251-300 in the world as per QS World University Rankings by Subject 2023.

Course Objectives

- Demonstrate scope of simulation in manufacturing process
- Develop detailed understanding about Finite element analysis and application to manufacturing process.
- Describe residual stress & distortion aspects in manufacturing and its simulation
- Understanding of simulation and application using various packages.

Program Schedule

Date	Session I	Session II
04/09/2023	Dr. Jambeswar Sahu (10:00 AM-12:30 PM)	Dr. Bhargav M (03:00 PM-05:30 PM)
05/09/2023	Dr. Vivek Kumar (10:00 AM-12:00 PM)	Dr. Saumya (03:00 PM-05:00 PM)
06/09/2023	Dr. Jeet Patil (10:00 AM-12:00 PM)	Dr. Oomar (03:00 PM -05:00 PM)
07/09/2023	Dr. Nipal Deka (10:00 AM-12:30 PM)	Dr. Chinmaya (03:00 PM-05:30 PM)
09/09/2023	Dr. Sagar Telrandhe (10:00 AM-12:00 PM)	Dr. Yogesh G (03:00 PM-05:00 PM)
11/09/2023	Dr. Jambeswar Sahu (10:00 AM-12:00 PM)	Dr. Pankaj Biswas (03:00 PM-05:00 PM)
12/09/2023	Dr. Jitesh Vasavada (10:00 AM-12:00 PM)	Dr. Anoj Giri (03:00 PM-05:00 PM)
13/09/2023	Dr. Anoj Giri (10:00 AM-12:00 PM)	Dr. M.M. Mahapatra (03:00 PM-05:00 PM)
14/09/2023	Dr. Anoj Giri (10:00 AM-12:00 PM)	Dr. Pankaj Biswas (03:00 PM - 05:00 PM)
15/09/2023	Dr. Anoj Giri (10:00 AM-12:00 PM)	Dr. Ashish Kumar (03:00 PM - 05:00 PM)