Short term Course on Modeling and Simulation using Finite Element Method for Engineering Applications (MSFEMEA-2017) at IIT Mandi from 19-23 June 2017

A short term course on "Modeling and Simulation using Finite Element Method for Engineering Applications (MSFEMEA-2017)" was organized by School of Engineering IIT Mandi during 19-23 June 2017. Finite Element Method (FEM) is a numerical and computer-based technique for solving a variety of practical engineering problems that arise in different fields namely structural analysis, fluid flow, heat transfer, vibrations, bio-mechanics, electrical and magnetic fields, etc. Objective of this course was to introduce finite element method to participants, so that they equipped to solve various problems of engineering, sciences and industries. This course contained17 hours lecture sessions and 10 hours case studies sessions on different kind of engineering problems.It introduce basic equations of practical engineering problems, mathematical principles of FEM, implementation of FEM for variety of problems, case studies and limitations of FEM, motivation for eXtended finite element method (XFEM), formulation and implementation of XFEM, Isogeometric FEM and Meshfree Methods. Hencethe programme was aimed at enable participants about FEM formulation and implementation for real engineering problems.Total35 participants including faculty and students from other Engineering Institutions, practicing engineers and scientist from industries and M. Tech. students & laboratory staff attended the course.Out of total 35 participants, 29 participants were from different regions of India like Karnataka, Uttar Pradesh, Rajasthan, Haryana, Punjab, Jammu & Kashmir, Delhi and Delhi NCR. Apart from the faculty from IIT Mandi,one subject expert Dr. IndraVir Singh from IIT Roorkee also delivered lectures. Main organizers of the training programme were Dr. Himanshu Pathak, Dr. Rajeev Kumar and Dr. Vishal S. Chauhan.