

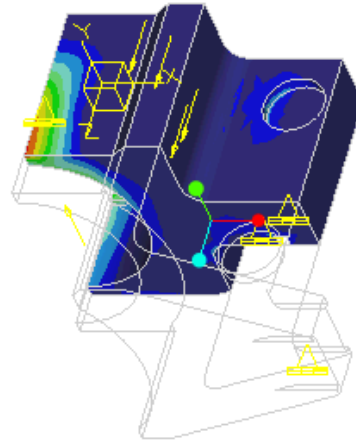
Pro/ENGINEER Mechanical Simulation using Pro/ENGINEER Wildfire 4.0

Overview

Course Code TRN-2167-T

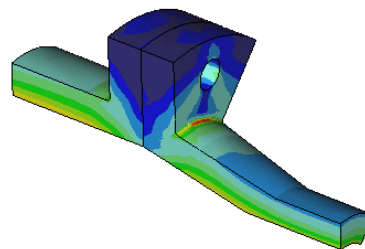
Course Length 5 Days

This course is designed for new users who want to test, validate, and optimize product designs with the Pro/ENGINEER Wildfire 4.0 Mechanical module. Mechanical enables you to simulate structural and thermal loads on product designs. In this course, you will complete comprehensive, hands-on lab exercises that simulate realistic analysis and design optimization activities. You will also learn about advanced topics such as dynamic analyses, combined mechanical and thermal analyses, and Fatigue Studies. A module on Mechanical Best Practices is also included to help users avoid some of the more common problems that new users encounter. After completing the course, you will be able to run engineering analyses and optimizations on your product design models. At the end of each module, you will find a set of review questions to reinforce critical topics from that module. Your instructor will discuss these with the class. At the end of the course, you will find a course assessment in Pro/FICIENCY intended to evaluate your understanding of the course as a whole. After completing the course you will be well prepared to complete Pro/MECHANICA analyses on product design projects in Pro/ENGINEER Wildfire 4.0.



Course Objectives

- Learning the basic Pro/MECHANICA Analysis Process
- Theory and Mechanical Model Topics
- Exploring Results
- Materials and Material Properties
- Understanding and Using Pro/MECHANICA idealizations
- Understanding and Using Structural Loads
- Understanding and Using Structural Constraints
- Running Structural Analyses
- Running Thermal Analyses
- Convergence



- Analyzing Assemblies with Pro/MECHANICA
- Completing Design and Sensitivity Studies
- Running Optimization Studies
- Advanced Topics
- Analysis Best Practices
- Analysis Projects

Prerequisites

- Three months of Pro/ENGINEER Wildfire 4.0 experience

Audience

- This course is intended for design engineers and mechanical designers. People in related roles will also benefit from taking this course.
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Agenda

Day 1

Module 1	The Pro/ENGINEER Mechanica 4.0 Process
Module 2	Theory and Mechanica Model Topics
Module 3	Results
Module 4	Materials and Material Properties

Day 2

Module 5	Idealizations
Module 6	Structural Loads
Module 7	Structural Constraints
Module 8	Structural Analysis I

Day 3

Module 9	Structural Analysis II
Module 10	Thermal Analysis
Module 11	Convergence
Module 12	Analyzing Assemblies I

Day 4

Module 13	Analyzing Assemblies II
Module 14	Design and Sensitivity Studies
Module 15	Optimization Studies
Module 16	Dynamic Analyses

Day 5

Module 17	Advanced Topics
Module 18	Analysis Best Practices
Module 19	Projects
