PTC University

Mechanism Design and Dynamics with Pro/ENGINEER Wildfire 2.0

Course Code	TRN-1801-T
Course Length	1 Day

Overview

This course is designed for experienced users who want to add motion to their products and analyze dynamic reactions of moving components. You will focus on learning advanced modeling and analysis skills in this comprehensive, hands-on course. Topics include creating mechanism connections, modeling dynamic entities, defining mechanism analyses, and evaluating results. These topics will enable you to measure dynamic reactions of components, measure the force required to keep a mechanism balanced, determine the resting state of a mechanism, and determine whether a mechanism reacts as intended.

After completing the course you will be well prepared to work effectively on mechanism designs using Pro/ENGINEER Wildfire Mechanism Design Extension and/or Mechanism Dynamics Option.

Prerequisites

- Fast Track to Pro/ENGINEER Wildfire 2.0 and/or 6 months experience with Pro/ENGINEER

Audience

This course is intended for product designers. People in related roles will also benefit from taking this course.

Topics

- Identifying Differences between Mechanism Design Extension and Mechanism Dynamics Option
- Creating Joint, Gear, Cam, and Slot Connections
- Applying Motors, Springs, and Dampers to Assemblies
- Applying Forces, Torques, and Gravity to Assemblies
- Creating Kinematic Analyses
- Creating Dynamic Analyses
- Creating Force Balance Analyses
- Creating Static Analyses
- Measuring Forces, Velocities, Accelerations, and Other Reactions on Assemblies
- Checking for Dynamic Interferences
- Evaluating Results

Agenda

Day 1

Module 1	Introduction to Mechanism Design and Dynamics with Pro/ENGINEER Wildfire 2.0
Module 2	Creating Mechanism Connections
Module 3	Modeling Dynamic Entities
Module 4	Defining Mechanism Analyses
Module 5	Evaluating Results
Module 6	Project