



## **Mechanism Design using Pro/ENGINEER Wildfire 3.0**

Course Code TRN-1854-T  
Course Length 1 Day

### **Overview**

This course is designed for experienced users who want to add motion to their products. You will focus on learning advanced assembly skills in this comprehensive, hands-on course. Topics include creating mechanism connections, configuring the mechanism model, creating a kinematic analysis, and evaluating results. These topics will enable you to simulate the range of motion between components in your moving assemblies, create gear connections that simulate the gear ratios, create cam connections that enable Pro/ENGINEER parts to .push. other parts they come into contact with, and check for collisions between moving components. Furthermore, you learn about how you can use Design Animation to animate your product, how you can use Mechanism Dynamics to simulate reaction forces between components, and how you can use Behavioral Modeling to optimize your mechanism.

After completing this course, you will be prepared to work on mechanism designs using Pro/ENGINEER Wildfire Mechanism Design. Pro/FICIENCY assessments will be provided in order for you to assess your understanding of the course materials. The assessment results will also identify the class topics that require further review. At the end of the class, you will either take an assessment via your PTC University account, or your instructor will provide training on how to do this after the class.

### **Prerequisites**

Introduction to Pro/ENGINEER Wildfire 3.0 or equivalent experience.

### **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 Bodies
- Creating Mechanism Connections in Pro/ENGINEER
- Creating Cam-Follower and Gear Pair Connections
- Applying Servo Motors to Assemblies
- Creating Position Analyses
- Creating Kinematic Analyses
- Evaluating Results
- Creating Trace Curves and Motion Envelopes

## Agenda

### Day 1

Module 1 Introduction to Mechanism Design

Module 2 Creating Mechanism Connections

Module 3 Configuring the Mechanism Model and Analysis

Module 4 Evaluating Results, Animating, and Optimizing the Mechanism

Module 5 Project

