

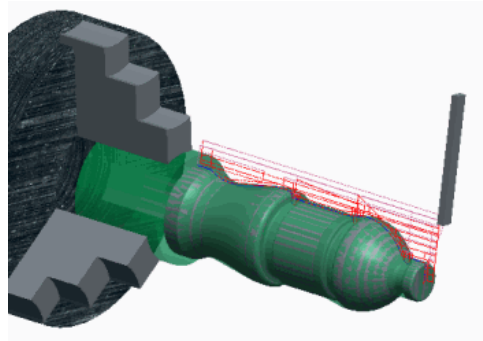
Turning using Creo Parametric 2.0

Overview

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|---------------|------------|
| Course Code | TRN-3925-V |
| Course Length | 3 Days |

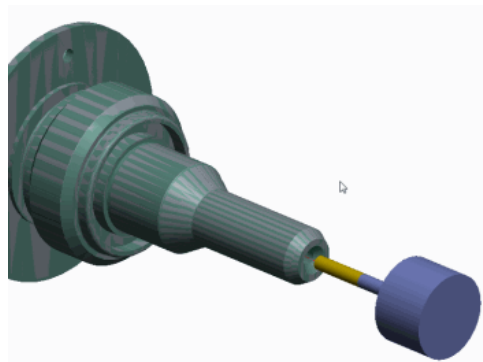
In this course, you will learn how to machine products using Creo Parametric 2.0 manufacturing tools. This course covers creating toolpaths for two axis turning machines. During the course, you will learn how to complete each phase of the manufacturing process. You will start by creating manufacturing models and configuring the manufacturing environment. This will include configuring tools, fixtures, and machining operations. You will then learn how to create turning sequences, holmaking sequences, and post-process cutter location (CL) data to create machine code. After completing this course, you will be able to create numerical control (NC) programs for turning machines and post-process cutter location (CL) data to create machine specific code.

At the end of each module, you will complete a set of review questions to reinforce critical topics from that module. At the end of the course, you will complete a course assessment in Pro/FICIENCY intended to evaluate your understanding of the course as a whole.



Course Objectives

- Understand the manufacturing process
- Create and configure manufacturing models
- Configure the manufacturing environment
- Create and modify turning sequences
- Create and modify holmaking sequences
- Use the process manager to create NC sequences
- Post-process cutter location (CL) data



Prerequisites

- Introduction to Creo Parametric – Fundamentals (Web Based Training) or equivalent experience

Audience

- This course is intended for manufacturing engineers and NC machinists. People in related roles will also benefit from taking this course.
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Agenda

Day 1

| | | |
|--------|---|--|
| Module | 1 | Introduction to Turning Manufacturing |
| Module | 2 | Creating Turning Manufacturing Models |
| Module | 3 | Configuring Turning Operations |
| Module | 4 | Using Turning Reference Models |
| Module | 5 | Using Turning Workpiece Models |
| Module | 6 | Creating and Using Turning NC Model Assemblies |
| Module | 7 | Creating and Configuring Turning Workcells |

Day 2

| | | |
|--------|----|---|
| Module | 8 | Creating and Configuring Turning Tools |
| Module | 9 | Using Template Manufacturing Turning Models |
| Module | 10 | Using Turning Manufacturing Parameters |
| Module | 11 | Creating Area Removal Sequences |
| Module | 12 | Creating Profile Turning Sequences |
| Module | 13 | Creating Grooving Sequences |

Day 3

| | | |
|--------|----|--|
| Module | 14 | Creating Turning Thread Sequences |
| Module | 15 | Creating Turning Holemaking Sequences |
| Module | 16 | Using the Process Manager for Turning |
| Module | 17 | Creating and Post-Processing Turning CL Data Files |
| Module | 18 | Turning Project: Needle Valve |

Course Content

Module 1. Introduction to Turning Manufacturing

- i. Manufacturing Turning Process Overview
- ii. Understanding the Turning Coordinate System
- iii. Understanding Turning Material Removal

Knowledge Check Questions

Module 2. Creating Turning Manufacturing Models

- i. Creating Turning Manufacturing Models

Knowledge Check Questions

Module 3. Configuring Turning Operations

- i. Configuring Turning Operations

Knowledge Check Questions

Module 4. Using Turning Reference Models

- i. Using Turning Reference Models

Knowledge Check Questions

Module 5. Using Turning Workpiece Models

- i. Using Turning Workpiece Models

Knowledge Check Questions

Module 6. Creating and Using Turning NC Model Assemblies

- i. Creating and Using Turning NC Model Assemblies

Knowledge Check Questions

Module 7. Creating and Configuring Turning Workcells

- i. Creating and Configuring Turning Workcells

Knowledge Check Questions

Module 8. Creating and Configuring Turning Tools

- i. Understanding Turning Tools
- ii. Understanding Turning Tool Orientation
- iii. Creating Standard Turning Tools
- iv. Creating Solid Model Turning Tools
- v. Creating and Using Turning Tool Cutting Data
- vi. Retrieving Turning Tool Data

Knowledge Check Questions

Module 9. Using Template Manufacturing Turning Models

- i. Using Template Manufacturing Turning Models

Knowledge Check Questions

Module 10. Using Turning Manufacturing Parameters

- i. Understanding Turning Manufacturing Parameter Concepts
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- ii. Configuring Turning Parameter Values
- iii. Using Turning Site Parameter Files

Knowledge Check Questions

Module 11. Creating Area Removal Sequences

- i. Creating Turning Cut Geometry
- ii. Outside Area Removal
- iii. Face Area
- iv. Inside Area

Knowledge Check Questions

Module 12. Creating Profile Turning Sequences

- i. Creating Outside Profile Turning Sequences
- ii. Creating Face Profiling Turning Sequences
- iii. Creating Inside Profile Turning Sequences

Knowledge Check Questions

Module 13. Creating Grooving Sequences

- i. Creating Outside Groove Sequences
- ii. Creating Inside Groove Sequences
- iii. Creating Face Groove Sequences

Knowledge Check Questions

Module 14. Creating Turning Thread Sequences

- i. Creating Outside Thread Sequences
- ii. Creating Inside Thread Sequences
- iii. Creating Face Thread Sequences

Knowledge Check Questions

Module 15. Creating Turning Holemaking Sequences

- i. Creating Drilling Sequences
- ii. Creating Countersink Sequences
- iii. Creating Tapping Sequences

Knowledge Check Questions

Module 16. Using the Process Manager for Turning

- i. Using Process Manager Tools for Turning
- ii. Editing Turning Process Items
- iii. Creating New Items in the Process Manager for Turning

Knowledge Check Questions

Module 17. Creating and Post-Processing Turning CL Data Files

- i. Creating and Post-Processing Turning CL Data Files

Knowledge Check Questions

Module 18. Turning Project: Needle Valve

- i. Turning Project: Needle Valve

Knowledge Check Questions
