

Windchill ProjectLink 10.2

Curriculum Guide



Live Classroom Curriculum Guide

- Workflow Administration of Windchill 10.2
- System Administration of Windchill 10.2
- Introduction to Windchill ProjectLink 10.2



Workflow Administration of Windchill 10.2

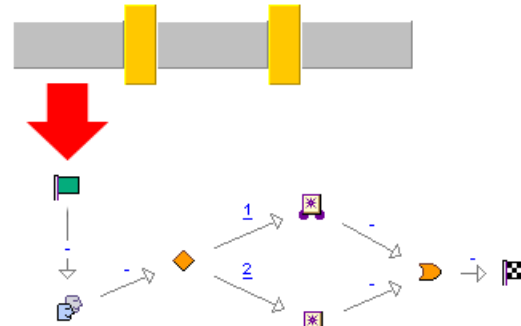
Overview

Course Code TRN-4339-T

Course Length 2 Days

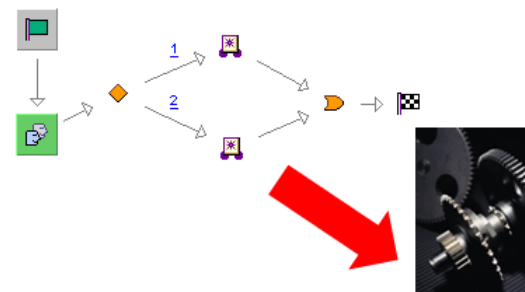
In this course, you will learn about Windchill workflow features and how to design, configure, and test workflow processes. After completing this course, you will be able to plan and configure workflow automation features to support your company's business processes.

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

- Describe the business objects that control and define the Windchill business process definition
- Identify the tools used to manage workflow templates
- Display, create, and modify workflow templates
- Determine the purpose and function of a pre-written workflow process
- Initiate, track, and manage workflow processes
- Define and configure assigned activities
- Use connectors in workflow templates
- Use links in workflow templates
- Group workflow nodes into block processes
- Create references to other workflow templates using proxy processes
- Send notifications from a workflow process
- Check an object in or out automatically in a workflow process
- Move a Windchill object through its life cycle using workflow processes
- Create a time delay in a workflow process
- Launch an external application from a workflow process
- Execute a Java expression within a workflow process
- Synchronize a workflow process with a system event



- Communicate with another server using a URL from a workflow process
- Configure basic and advanced life cycles
- Specify the workflows to be used in advanced life cycles
- Configure a promotion request
- Modify a workflow for use with promotion requests
- Use routing to reassign a life cycle in a project or program
- Create a life cycle and workflow for use with project routing

Prerequisites

- Business Administration of Windchill PDMLink 10.2

Audience

- This course is intended for Windchill business administrators and application developers. People in related roles will also benefit from taking this course.

Agenda

Day 1

Module 1 Using Workflow Tools

Module 2 Defining Manual Tasks

Day 2

Module 3 Controlling Process Flow

Module 4 Simplifying Complex Templates

Module 5 Automating Tasks

Module 6 Using Workflow Templates

Course Content

Module 1. Using Workflow Tools

- i. Workflow Use in the Windchill Product Lines
- ii. Identifying Process Management Objects
- iii. Workflow Management Tools
- iv. Workflow Administrators
- v. Accessing Workflow Template Administration
- vi. Using the Workflow Template Administrator
- vii. Displaying Workflow Templates
- viii. Creating Workflow Templates
- ix. Validating and Checking In Workflow Templates
- x. Modifying Workflow Templates
- xi. Exporting and Importing Workflow Templates
- xii. Workflow Creation Best Practices
- xiii. Understanding Workflow Processes
- xiv. Initiating a Process from a Workflow Template
- xv. Workflow Process States
- xvi. Searching for Workflow Processes
- xvii. Browsing to Workflow Processes
- xviii. Viewing Process Information
- xix. Managing Workflow Processes With the Process Manager
- xx. Managing Workflow Processes With the Workflow Process Administrator
- xxi. Determining the Status of a Process Node
- xxii. Administratively Manipulating Processes
- xxiii. Manipulating Process Nodes
- xxiv. Testing Workflow Templates

Knowledge Check Questions

Module 2. Defining Manual Tasks

- i. Defining Workflow Template Properties
 - ii. Understanding Assigned Activities
 - iii. Defining Assigned Activities
 - iv. Defining General Properties
 - v. Defining Activity Properties
 - vi. Defining Instructions
 - vii. Defining Participants
 - viii. Best Practices for Defining Participants
 - ix. Defining Deadlines
 - x. Defining Global Workflow Variables
 - xi. Defining Assigned Activity Variables
 - xii. Creating Assigned Activity and Global Variables
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- xiii. Granting Additional Access
- xiv. Understanding Variable Scope
- xv. Defining Routing
- xvi. Defining Automatic Routing
- xvii. Defining Transition Conditions
- xviii. Defining Execution Options
- xix. Defining Role Setup
- xx. Defining Resource Pool

Knowledge Check Questions

Module 3. Controlling Process Flow

- i. Creating Complex Processes with Connectors and Links
- ii. Understanding Connectors and Terminals
- iii. Using Start, Ground, and End Connectors
- iv. Using And Connectors
- v. Using Or Connectors
- vi. Using Links
- vii. Setting Link Properties
- viii. Using Loop Links
- ix. Using Conditional Connectors
- x. Using Threshold Connectors

Knowledge Check Questions

Module 4. Simplifying Complex Templates

- i. Simplifying Complex Processes
- ii. Using Block Processes
- iii. Converting Nodes to a Block Process
- iv. Block Process Properties
- v. Using Proxy Processes
- vi. Proxy Process Properties: General
- vii. Proxy Process Properties: Deadline/Variable Mapping

Knowledge Check Questions

Module 5. Automating Tasks

- i. Using Robots to Automate Tasks
 - ii. Using Method Robots
 - iii. Using Method Robots to Mature Objects
 - iv. Using Method Robots: Set State
 - v. Using Method Robots: Submit
 - vi. Using Method Robots: Promote/Demote/Deny/Drop
 - vii. Using Notification Robots
 - viii. Notification Robot Properties: General/Recipients
 - ix. Notification Robot Properties: Message/Attachments
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- x. Notification Message
- xi. Checkpoint Robot
- xii. Using Method Robots: Check Out/Check In
- xiii. Using Timer Robots
- xiv. Using Application Robots
- xv. Using Synchronization Robots
- xvi. Synchronization Robot Properties
- xvii. Object Event Synchronization
- xviii. Class Event Synchronization
- xix. Expression Synchronization
- xx. Using Expression Robots
- xxi. Expression Robot Properties
- xxii. Using the URL Robot
- xxiii. URL Robot Error Handling Properties

Knowledge Check Questions

Module 6. Using Workflow Templates

- i. Understanding Windchill Life Cycles
 - ii. Understanding Windchill Life Cycle Types
 - iii. Using Workflows in Windchill
 - iv. Life Cycle Association Rules
 - v. Defining Object Life Cycle Resolution
 - vi. Specifying Life Cycle Properties
 - vii. Adding Life Cycle States
 - viii. Defining States
 - ix. Understanding Transitions
 - x. Defining Transitions
 - xi. Understanding Life Cycle Transition Types
 - xii. Understanding Life Cycle Transition Types
 - xiii. Understanding Life Cycle Transition Types
 - xiv. Transition Examples
 - xv. Defining Role Participation
 - xvi. Defining Access Permissions using Life Cycles
 - xvii. Selecting Workflow Templates
 - xviii. Life Cycle and Workflow Template Relationships
 - xix. Life Cycle and Workflow Template Relationships
 - xx. Life Cycle Best Practices
 - xxi. Managing Promotion Preferences
 - xxii. Understanding the Promote Action in a Basic Life Cycle
 - xxiii. The Promotion Request Approval Process
 - xxiv. The Promotion Request Review Process
 - xxv. Managing Promotion Preference Processes
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- xxvi. Creating a New Promotion Process Preference
- xxvii. Changing a Promotion Preference
- xxviii. Creating Workflow Templates for Promotion Requests
- xxix. Routing Objects in Projects and Programs
- xxx. Creating a Workflow Template for Routing
- xxxi. Creating a Life Cycle Template for Routing

Knowledge Check Questions

System Administration of Windchill 10.2

Overview

Course Code	TRN-4340-T
Course Length	3 Days

In this course, you will gain an understanding of how to perform routine Windchill system administration tasks, including how to manage Windchill services and optimize Windchill components for performance. You will focus on daily, weekly, and monthly system maintenance tasks required by the Windchill system administrators. You will also learn how to install and configure Windchill system components and how to implement file vaulting and content replication. Other topics that will be reviewed include managing an Oracle database, troubleshooting background queues, controlling system backup procedures, and setting up the client environment.

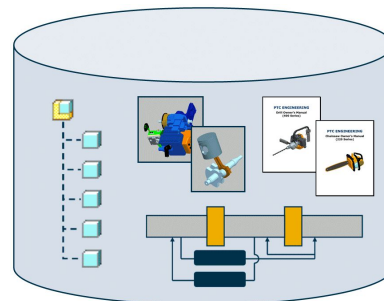
At the end of each module, you will complete a set of review questions to reinforce critical topics from that module. At the end of the course, you will complete a course assessment in Pro/FICIENCY intended to evaluate your understanding of the course as a whole.

Note: Due to the subject matter of this class, simulated software is used for Windchill installation to provide an accurate, effective, and efficient training experience that could not otherwise be duplicated in a standard classroom environment.



Course Objectives

- Understand Windchill architecture
- Install and configure Windchill solutions
- Start and stop Windchill components
- Manage Windchill configuration properties
- Implement file vaulting and content replication
- Tune Windchill components for performance
- Tune Windchill workflows for performance
- Manage background queues
- Manage Oracle database
- Manage system backups
- Manage Windchill system logs and alerts
- Monitor daily, weekly, and monthly administration tasks
- Configure browser and JAVA settings for clients



Prerequisites

- Familiarity with the Windchill PDMLink 10.1 or Windchill ProjectLink 10.1 user interface
- Familiarity with the Windows command prompt and the ability to form and execute basic SQL statements

Audience

- This course is intended for System Administrators and Application Developers. People in related roles will also benefit from taking this course.
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Agenda

Day 1

Module	1	Introduction to the Windchill System Environment
Module	2	Installing Windchill Components
Module	3	Managing Windchill Services
Module	4	Managing Windchill Properties
Module	5	File Vaulting and Replication Overview
Module	6	Implementing File Vaults
Module	7	Implementing Content Replication

Day 2

Module	8	Tuning Windchill Server
Module	9	Managing Background Queues
Module	10	Tuning Workflow Processes
Module	11	Oracle Database Management
Module	12	Windchill Backup and Recovery

Day 3

Module	13	Managing Log Files and Alerts
Module	14	System Monitoring — Daily Tasks
Module	15	System Monitoring — Weekly Tasks
Module	16	System Monitoring — Monthly Tasks
Module	17	Setting up the Client Environment

Course Content

Module 1. Introduction to the Windchill System Environment

- i. Client Requirements
- ii. Windchill Architecture — Windchill Server
- iii. Windchill Architecture — Database
- iv. Windchill Architecture – Optional Servers
- v. Role of the System Administrator
- vi. Understanding Windchill Contexts
- vii. Windchill Product Characteristics
- viii. Windchill Library Characteristics
- ix. Using Folders
- x. Data Management Objects
- xi. Iteration and Revision Controls
- xii. Access Controls
- xiii. Process Controls
- xiv. Understanding the Windchill User Interface
- xv. Using the Navigator
- xvi. Navigating Products and Libraries
- xvii. Locating Information
- xviii. Understanding Information Pages
- xix. Accessing Help

Knowledge Check Questions

Module 2. Installing Windchill Components

- i. Windchill Software Matrices
- ii. Supported Virtualization Platforms
- iii. Sizing a Windchill System
- iv. Setting Application Name
- v. Software Downloads
- vi. Windchill Technical Documents
- vii. Windchill Required Components
- viii. Installing Oracle
- ix. Oracle Post Installation Activities
- x. The PTC Solution Installer (PSI)
- xi. Understanding Installation Types
- xii. Selecting the Database Size
- xiii. The Staging Area Options
- xiv. Installing Windchill Solution
- xv. Installing on Multiple Machines
- xvi. Installing Optional Components

Knowledge Check Questions

Module 3. Managing Windchill Services

- i. Identifying Major Windchill Services
- ii. Starting/Stopping Apache Web Server
- iii. Starting/Stopping Windchill Directory Server
- iv. Starting/Stopping Oracle
- v. Starting/Stopping Windchill
- vi. Running Apache as a Windows Service
- vii. Windchill Directory Server Control Panel
- viii. Running Windchill Directory Server as a Service
- ix. Running Windchill as a Windows Service
- x. Automating Windchill Startup
- xi. Automating Windchill Shutdown

*Knowledge Check Questions***Module 4. Managing Windchill Properties**

- i. System Administration Utilities
- ii. The Windchill Command
- iii. The Windchill Shell
- iv. Windchill Configuration Properties Files
- v. The site.xconf File
- vi. The JMX Clients
- vii. Using JConsole to Modify Property Values
- viii. The xconfmanager Utility
- ix. The xconfmanager — Options
- x. The xconfmanager – Example
- xi. The xconfmanager – Validate Changes
- xii. Properties Managed by the Windchill Configuration Assistant
- xiii. Creating a Custom XCONF File

*Knowledge Check Questions***Module 5. File Vaulting and Replication Overview**

- i. File Vaulting
 - ii. File Storage Options
 - iii. Local File Vaulting Architecture
 - iv. Content Replication
 - v. Content Replication Architecture
 - vi. Windchill File Servers
 - vii. Centrally Vaulted Content
 - viii. Remotely and Centrally Vaulted Content
 - ix. File Vaulting Strategies
 - x. Types of File Vaults
 - xi. Checking an Object into a Windchill Main Server
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- xii. Requesting Objects That Have Not Yet Been Replicated
- xiii. Requesting Objects from File Servers That Are Not Preferred
- xiv. Server to Server Replication
- xv. Content Synchronization and Replication
- xvi. Local Replication for File Servers

Knowledge Check Questions

Module 6. Implementing File Vaults

- i. Planning External File Storage
- ii. Multiple Vaults Configuration
- iii. Vaulting Rules
- iv. Single Vault Configuration
- v. Forcing Contents to a Single Vault — Implications
- vi. Single Vault vs. Multi Vault Configuration
- vii. Vaults with Automatic Folder Creation
- viii. The Central Cache Vault
- ix. Setting Up External Storage
- x. Managing Revaulting
- xi. Maintaining Vaults
- xii. Changing the Location of Files in Vaults
- xiii. The Default System Target Vault

Knowledge Check Questions

Module 7. Implementing Content Replication

- i. Installing the File Server — Requirements
- ii. Enabling Remote File Server Support
- iii. Generating the Security Key
- iv. Using the File Server Management Utility
- v. Registering the File Server
- vi. Configuring Replica Vaults
- vii. Creating Replication Rules
- viii. Creating Replication Schedules
- ix. Replication Performance and Scalability
- x. Replication and Visualization Service
- xi. Setting the Preferred File Server
- xii. User-Initiated Replication

Knowledge Check Questions

Module 8. Tuning Windchill Server

- i. Windchill Server Tuning Objectives
 - ii. Monolithic Windchill Configuration
 - iii. Multi-Tiered Windchill Configuration
 - iv. Server Heap Size
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- v. Setting Windchill Cache Sizes — wt.properties
- vi. Setting Windchill Cache Sizes — db.properties
- vii. Viewing Windchill Cache Statistics
- viii. Limiting Search Results
- ix. Windchill Configuration Assistant (WCA)
 - x. Affected Files
 - xi. Running the Windchill Configuration Assistant
- xii. Propagating Values from Intermediate Properties Files
- xiii. Rolling Back Configuration Changes
- xiv. Number of Method Servers
- xv. Cleaning Windchill System Cache
- xvi. Why Do Windchill Method Servers Stop Unexpectedly?
- xvii. Using Anti-Virus Software
- xviii. Server Cluster Configuration
 - xix. Server Status
 - xx. WAN Performance Optimizing Options
 - xxi. WAN Acceleration

Knowledge Check Questions

Module 9. Managing Background Queues

- i. Windchill Background Queues
- ii. Queue Manager
- iii. Queue Entry States
- iv. Out-of-the-Box Background Queues
- v. Single Method Server Configuration
- vi. Configuring a Background Method Server
- vii. Configuring Multiple Background Servers
- viii. Distributing Background Queues
- ix. Tuning Background Queues
 - x. Performing Regular Queue Maintenance
 - xi. Deleting a Queue

Knowledge Check Questions

Module 10. Tuning Workflow Processes

- i. Workflow Queues
 - ii. Pool Queues
 - iii. Monitoring Workflow Queue Entries
 - iv. Configuring Queue Pooling
 - v. After Queue Pooling
 - vi. Configuring Dedicated Workflow Queues
 - vii. Tagging Dedicated Workflow Queues
 - viii. After Dedicated Queues
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*Knowledge Check Questions***Module 11. Oracle Database Management**

- i. Reviewing Instance and Database
- ii. System Global Area (SGA)
- iii. Reviewing Background Processes
- iv. Understanding Oracle Storage Hierarchy
- v. Oracle Enterprise Manager Database Control
- vi. Oracle Initialization Parameters
- vii. Control Files
- viii. Oracle Tablespace
- ix. Oracle Datafiles
- x. Redo Log Files
- xi. Automatic Memory Management (AMM)
- xii. Automatic Shared Memory Management (ASMM)
- xiii. Approximating Initial Memory Sizes
- xiv. Automatic Workload Repository (AWR)
- xv. Automatic Database Diagnostic Monitor (ADDM)

*Knowledge Check Questions***Module 12. Windchill Backup and Recovery**

- i. Windchill Backup Architecture
 - ii. Windchill Data Repositories
 - iii. Types of Backup
 - iv. Performing a Cold Backup
 - v. Recovering from a Cold Backup
 - vi. Performing a Hot Backup
 - vii. Recovering from a Hot Backup
 - viii. Oracle Backup and Recovery — Enterprise Manager
 - ix. Oracle Archive Log Mode
 - x. Oracle Flash Recovery Area
 - xi. Oracle Suggested Backup Strategy
 - xii. Suspending Background Queues
 - xiii. Read Only Mode for Vaults
 - xiv. Generating Vault Backup Information
 - xv. The WContentVerify Tool
 - xvi. Mirroring the Local Cache Vault
 - xvii. Rebuilding Replica Vaults
 - xviii. Backing up the Windchill Directory Server
 - xix. Backing Up LDAP Data using the Backup Command
 - xx. Restoring Windchill Directory Server
 - xxi. Backing Up LDAP Directory Data using Control Panel
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- xxii. Restoring LDAP Directory Data using Control Panel
- xxiii. Exporting LDAP Data
- xxiv. Importing LDAP Data

Knowledge Check Questions

Module 13. Managing Log Files and Alerts

- i. Windchill Logging Mechanism
- ii. Windchill Log Properties
- iii. Setting Windchill Log Levels
- iv. Populating JMX-Administrators
- v. Viewing Windchill Log Files
- vi. Managing Log Files using JConsole
- vii. System Error Reporting
- viii. Using the Persisted Log Events Page
- ix. The Log File Viewer Page
- x. The Log Event Details Page
- xi. Administration Actions After Receiving Error Reports
- xii. System Configuration Collector
- xiii. Oracle Alerts
- xiv. Oracle Alerts — Setting Up a Mail Server
- xv. Setting Up Direct Oracle Alert Notifications
- xvi. Oracle Alerts — Setting Metric Thresholds
- xvii. Managing Directory Server Logs
- xviii. Managing Web Server Logs

Knowledge Check Questions

Module 14. System Monitoring — Daily Tasks

- i. Daily System Monitoring Tasks — Checklist
 - ii. Perform and Verify Scheduled System Backups
 - iii. The Server Status Page
 - iv. PTC System Monitor
 - v. System Monitoring using JMX Clients
 - vi. Monitoring CPU and Memory Usage by Windchill Processes
 - vii. System Components Availability
 - viii. Monitoring Queues using Queue Manager
 - ix. Monitoring Queues using JMX Clients
 - x. Monitoring Queues using Queue Analyzer
 - xi. Queue and Workflow Health Check Script
 - xii. Monitor File Vaults
 - xiii. Monitoring Vaults using the System Configuration Collector
 - xiv. Review Application Server Logs
 - xv. Review Database Logs
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- xvi. Check Database Schema Statistics
- xvii. Monitor Network Health
- xviii. Review PTC Technical Support Subscription E-mails

Knowledge Check Questions

Module 15. System Monitoring — Weekly Tasks

- i. Weekly System Monitoring Tasks — Checklist
- ii. Monitor Disk Space Usage
- iii. Identifying BLOBS That Have Not Been Vaulted
- iv. Remove Unreferenced Files from File Vaults
- v. The RemoveUnreferencedFiles Tool
- vi. Automated Cleanup of Replica Vaults
- vii. Generating Unreferenced Files Report
- viii. Defragment Windows Disks
- ix. Check Performance using Monitoring Tools
- x. Perform Database Maintenance

Knowledge Check Questions

Module 16. System Monitoring — Monthly Tasks

- i. Monthly System Monitoring Tasks — Checklist
- ii. Execute Performance Benchmarks
- iii. Windchill File Server Test
- iv. Perform Database Diagnostics
- v. Resolve Disconnected Principals
- vi. Cleaning up Data for Deleted Users
- vii. Evaluate System Settings using Windchill Configuration Assistant
- viii. Generate Throughput and Security Audit Reports
- ix. Perform Workgroup Manager Maintenance Tasks
- x. Review Windchill and Creo Settings
- xi. Purge Obsolete or Unused Data
- xii. Apply Maintenance Patches and Updates
- xiii. Clone Production Server to Test Server
- xiv. Yearly Administrative Tasks

Knowledge Check Questions

Module 17. Setting up the Client Environment

- i. Setting Up Your Browser
 - ii. Browser's ActiveX Settings
 - iii. Pop-Up Blocker Interference
 - iv. Browser Locale Settings
 - v. Memory Allocation for Applets
 - vi. Installing Creo View
 - vii. Installing Desktop Integration
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- viii. Setting Your Preferred File Server Site
- ix. Product Structure Explorer Preferences
- x. Configuring the Windchill Home Page

Knowledge Check Questions

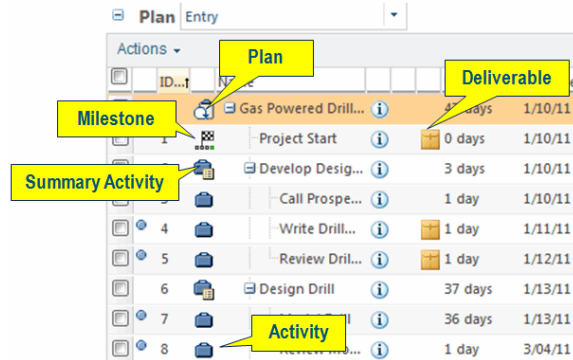
Introduction to Windchill Projectlink 10.2

Overview

Course Code	TRN-4270-T
Course Length	1 Day

In this course, you will learn how to participate in and manage projects using Windchill ProjectLink 10.2. Emphasis will be placed on learning how to access and navigate the Windchill ProjectLink interface, including navigating and using your personal environment, the project environment, and project storage. You will also learn how to manage document information, the project plan, and assigned tasks. You will gain an understanding of creating and managing projects, which includes planning activities and milestones, assigning the project team, and setting up the folder storage structure. Finally, you will learn how to communicate with other team members using the collaboration tools of Windchill ProjectLink.

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

- Access Windchill Help
- Browse and search for Windchill objects
- View the attributes, content, and relationships of Windchill objects
- Identify the project manager’s role
- Plan projects, project resources, and project storage
- Identify the differences between projects and programs
- Create projects in Windchill, including the plan objects required to support them
- Design an action item
- Create and manage project storage and access controls
- Modify and create documents
- View Windchill objects in Creo View
- Manage your Windchill notebook
- Create and manage subscriptions



- Complete Windchill assignments
 - Reassign assignments to other team members
 - Update the project status
 - Monitor the project timeline
 - Use Microsoft Project in conjunction with Windchill
 - Discuss objects in forums
 - Manage and schedule meetings
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Prerequisites

- None

Audience

- This course is intended for project participants and project managers using the ProjectLink application. People in related roles will also benefit from taking this course.
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Agenda

Day 1

Module	1	Introduction to the Windchill Environment
Module	2	Introduction to Project Management
Module	3	Locating and Viewing Information
Module	4	Creating Documents and Links
Module	5	Implementing Projects
Module	6	Introduction to Visualization
Module	7	Modifying and Managing Documents
Module	8	Managing Projects
Module	9	Managing Your Work

Course Content

Module 1. Introduction to the Windchill Environment

- i. Integrated Windchill PDMLink and Windchill ProjectLink
- ii. Windchill PDMLink
- iii. Windchill ProjectLink
- iv. Pro/INTRALINK
- v. Arbortext Content Manager
- vi. Content Management
- vii. Windchill Environment
- viii. Data Management Objects
- ix. Change Management Objects
- x. Project Management Objects
- xi. Storage Locations
- xii. Iteration and Revision Controls
- xiii. Process Controls
- xiv. Access Controls
- xv. Collaboration Features
- xvi. Logging On to Windchill
- xvii. Understanding the Windchill User Interface
- xviii. Using the Home Page
- xix. Using Quick Links
- xx. Using the Navigator
- xxi. Using the Breadcrumb Trail
- xxii. Navigating Products and Libraries
- xxiii. Navigating Projects and Programs
- xxiv. Navigating Changes
- xxv. Accessing Help

Knowledge Check Questions

Module 2. Introduction to Project Management

- i. Project Management – Overview
 - ii. Project Managers Responsibilities
 - iii. Project Plan Objects
 - iv. Planning Projects
 - v. Project Components
 - vi. Project Plan Views – Plan View
 - vii. Project Plan Views – Timeline View
 - viii. Project Plan Views – Gantt Explorer
 - ix. Planning Project Storage
 - x. Planning Project Resources
 - xi. Programs – Making Programs Visible
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- xii. Programs and Projects – Differences in Design Intent
- xiii. Programs and Projects – Differences in Functionality

Knowledge Check Questions

Module 3. Locating and Viewing Information

- i. Locating Information
- ii. Using Simple Search
- iii. Using Advanced Search
- iv. Browsing
- v. Using Mini Information Pages
- vi. Using Windchill Tables
- vii. Working with Table Columns
- viii. Understanding Information Pages
- ix. Viewing Structure
- x. Understanding Object Capabilities
- xi. Document Capabilities
- xii. CAD Document Capabilities
- xiii. Part and End Item Capabilities
- xiv. Dynamic Document Capabilities
- xv. Problem Report Capabilities
- xvi. Change Request Capabilities
- xvii. Change Notice Capabilities
- xviii. Relationship Explorer

Knowledge Check Questions

Module 4. Creating Documents and Links

- i. Creating Documents and Links
- ii. New Document: Set Attributes – Type
- iii. New Document: Set Attributes – Template
- iv. New Document: Set Attributes (Primary Content)
- v. New Document: Set Attributes (Attributes)
- vi. New Document: Set Attachments
- vii. New Multiple Documents
- viii. Creating Links

Knowledge Check Questions

Module 5. Implementing Projects

- i. Creating a Project
 - ii. Selecting a Project Team
 - iii. Configuring a Project
 - iv. Managing the Project Team
 - v. Managing Resources
 - vi. Starting Projects
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- vii. Project Activities and Summary Activities
- viii. Creating An Activity – General Attributes
- ix. Creating An Activity – Schedule Attributes
- x. Creating An Activity – Advanced Attributes
- xi. Scheduling Attributes
- xii. Creating Multiple Activities
- xiii. Creating a Summary Activity
- xiv. Project Milestone
- xv. Creating A Milestone
- xvi. Project Deliverables
- xvii. Creating a Project Deliverable
- xviii. Action Items
- xix. Resolving an Action Item
- xx. Creating Action Items
- xxi. Classic and Enhanced Projects

Knowledge Check Questions

Module 6. Introduction to Visualization

- i. Identifying Readable Visualization Object Types
- ii. Understanding Creo View's Basic Capabilities
- iii. Understanding the Creo View User Interface
- iv. Viewing Area User Interface
- v. Understanding the Ribbon
- vi. The Creo View File Menu User Interface
- vii. Quick Access Toolbar User Interface
- viii. Primary Panel User Interface
- ix. Understanding the Upper Data Panel
- x. Understanding the Lower Data Panel
- xi. Starting Creo View from Windchill
- xii. Loading Viewables
- xiii. Opening Non-Model Files with Creo View
- xiv. Viewing Drawings
- xv. Viewing Images
- xvi. Orienting Drawings and Images
- xvii. Working with Pages and Sheets

Knowledge Check Questions

Module 7. Modifying and Managing Documents

- i. Overview of Modifying Documents
 - ii. Modifying Documents — Check Out
 - iii. Modifying Documents — Edit
 - iv. Modifying Documents — Check In
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- v. Modifying Documents — Undo Checkout
- vi. Modifying Documents — Replace Content
- vii. Modifying Documents — Revise
- viii. Associating Documents with Windchill Parts

Knowledge Check Questions

Module 8. Managing Projects

- i. Managing Projects
- ii. Project Status
- iii. Project State
- iv. Editing Plan Objects from Windchill Tables
- v. Edit Plan Object Wizard
- vi. Track Work Wizard
- vii. Edit in Gantt Explorer
- viii. Adding Objects to the Timeline
- ix. Exporting Projects
- x. Microsoft Project Plug-In
- xi. Managing Projects using MS Project
- xii. Importing, Exporting, and Syncing Plans with Microsoft Project

Knowledge Check Questions

Module 9. Managing Your Work

- i. Managing Your Work
- ii. Managing Tasks
- iii. Managing the Notebook
- iv. Managing Subscriptions
- v. Creating Subscriptions
- vi. Preference Manager
- vii. Setting Attachment Preferences
- viii. Setting Search Preferences
- ix. Setting Display Preferences
- x. Setting Table Preferences
- xi. Setting Visualization Preferences
- xii. Using the Windchill Clipboard
- xiii. Software Downloads
- xiv. Introduction to Communication Mechanisms
- xv. E-mailing Team Members
- xvi. E-mailing a Page
- xvii. Holding Discussions

Knowledge Check Questions

Web Based Curriculum Guide

- System Administration of Windchill 10.2
 - Introduction to Windchill ProjectLink 10.2
 - Locate and View Information with Windchill ProjectLink 10.2
 - Visualization with Creo View MCAD Lite 3.0 for Windchill ProjectLink 10.2
 - Standard Document Management with Windchill ProjectLink 10.2
 - Work Management with Windchill ProjectLink 10.2
 - Project Data Management with Windchill ProjectLink 10.2
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System Administration of Windchill 10.2

Overview

Course Code WBT-4340-0

Course Length 24 Hours

In this course, you will gain an understanding of how to perform routine Windchill system administration tasks, including how to manage Windchill services and optimize Windchill components for performance. You will focus on daily, weekly, and monthly system maintenance tasks required by the Windchill system administrators. You will also learn how to install and configure Windchill system components and how to implement file vaulting and content replication. Other topics that will be reviewed include managing an Oracle database, troubleshooting background queues, controlling system backup procedures, and setting up the client environment.

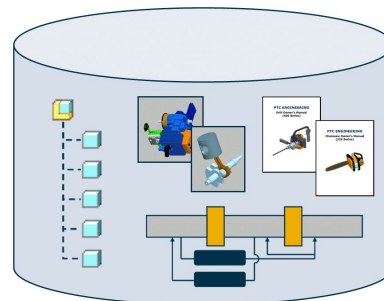
At the end of each module, you will complete a set of review questions to reinforce critical topics from that module. At the end of the course, you will complete a course assessment in Pro/FICIENCY intended to evaluate your understanding of the course as a whole.

Note: Due to the subject matter of this class, simulated software is used for Windchill installation to provide an accurate, effective, and efficient training experience that could not otherwise be duplicated in a standard classroom environment.



Course Objectives

- Understand Windchill architecture
- Install and configure Windchill solutions
- Start and stop Windchill components
- Manage Windchill configuration properties
- Implement file vaulting and content replication
- Tune Windchill components for performance
- Tune Windchill workflows for performance
- Manage background queues
- Manage Oracle database
- Manage system backups
- Manage Windchill system logs and alerts
- Monitor daily, weekly, and monthly administration tasks
- Configure browser and JAVA settings for clients



Prerequisites

- Familiarity with the Windchill PDMLink 10.1 or Windchill ProjectLink 10.1 user interface
- Familiarity with the Windows command prompt and the ability to form and execute basic SQL statements

Audience

- This course is intended for System Administrators and Application Developers. People in related roles will also benefit from taking this course.
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Table of Contents

Module	1	Introduction to the Windchill System Environment
Module	2	Installing Windchill Components
Module	3	Managing Windchill Services
Module	4	Managing Windchill Properties
Module	5	File Vaulting and Replication Overview
Module	6	Implementing File Vaults
Module	7	Implementing Content Replication
Module	8	Tuning Windchill Server
Module	9	Managing Background Queues
Module	10	Tuning Workflow Processes
Module	11	Oracle Database Management
Module	12	Windchill Backup and Recovery
Module	13	Managing Log Files and Alerts
Module	14	System Monitoring — Daily Tasks
Module	15	System Monitoring — Weekly Tasks
Module	16	System Monitoring — Monthly Tasks
Module	17	Setting up the Client Environment

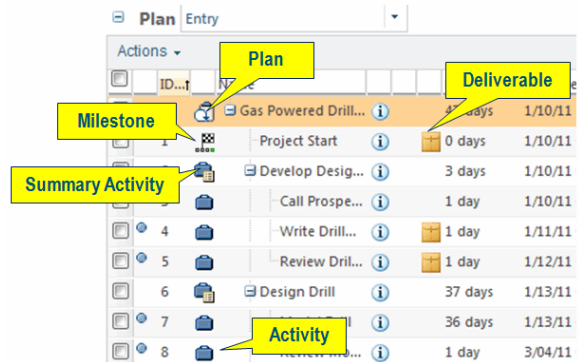
Introduction to Windchill Projectlink 10.2

Overview

Course Code	WBT-4270-0
Course Length	8 Hours

In this course, you will learn how to participate in and manage projects using Windchill ProjectLink 10.2. Emphasis will be placed on learning how to access and navigate the Windchill ProjectLink interface, including navigating and using your personal environment, the project environment, and project storage. You will also learn how to manage document information, the project plan, and assigned tasks. You will gain an understanding of creating and managing projects, which includes planning activities and milestones, assigning the project team, and setting up the folder storage structure. Finally, you will learn how to communicate with other team members using the collaboration tools of Windchill ProjectLink.

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

- Access Windchill Help
- Browse and search for Windchill objects
- View the attributes, content, and relationships of Windchill objects
- Identify the project manager's role
- Plan projects, project resources, and project storage
- Identify the differences between projects and programs
- Create projects in Windchill, including the plan objects required to support them
- Design an action item
- Create and manage project storage and access controls
- Modify and create documents
- View Windchill objects in Creo View
- Manage your Windchill notebook
- Create and manage subscriptions



- Complete Windchill assignments
- Reassign assignments to other team members
- Update the project status
- Monitor the project timeline
- Use Microsoft Project in conjunction with Windchill
- Discuss objects in forums
- Manage and schedule meetings

Prerequisites

- None

Audience

- This course is intended for project participants and project managers using the ProjectLink application. People in related roles will also benefit from taking this course.

Table of Contents

Module	1	Introduction to the Windchill Environment
Module	2	Introduction to Project Management
Module	3	Locating and Viewing Information
Module	4	Creating Documents and Links
Module	5	Implementing Projects
Module	6	Introduction to Visualization
Module	7	Modifying and Managing Documents
Module	8	Managing Projects
Module	9	Managing Your Work

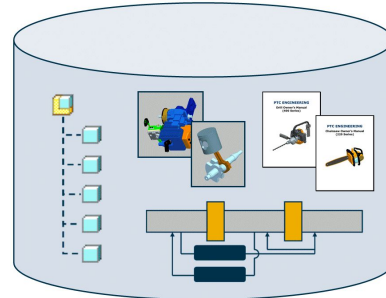
Locate and View Information with Windchill ProjectLink 10.2

Overview

Course Code	WBT-4221-0
Course Length	2 Hours

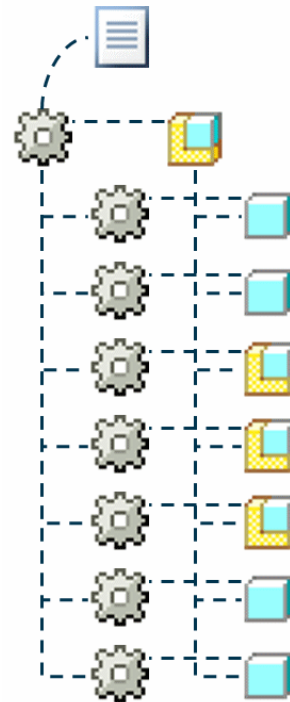
In this course, you will learn basic skills required to access and view information, such as: logging on, accessing help, and locating and viewing product information. This course constitutes a comprehensive review of Windchill ProjectLink locate and view functionality. In addition, the content is built to support topic-based course configurations.

You will complete Pro/FICIENCY skills assessment questions for each topic. These questions are used to help reinforce your understanding of the course topics.



Course Objectives

- Identify and describe the capabilities of Windchill's primary object types
- Identify Windchill storage locations, iteration and revision controls, process controls, access controls, and collaboration features
- Access Windchill
- Navigate within Windchill
- Access Help
- Execute simple and advanced searches
- Save searches
- Browse contexts
- Use, manage, and create Windchill table views
- View the attributes, content, and relationships of Windchill objects



Prerequisites

- Basic browser and Web navigation skills
- Basic understanding of product development processes and deliverables

Audience

- This course is intended for any user who needs to access product information residing within the Windchill ProjectLink system. People in related roles will also benefit from taking this course.
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Table of Contents

Module	1	Introduction to the Windchill Environment
Module	2	Locating Information
Module	3	Viewing Information

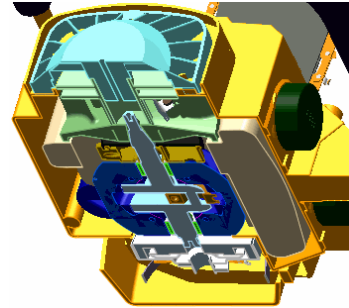
Visualization with Creo View MCAD Lite 3.0 for Windchill ProjectLink 10.2

Overview

Course Code	WBT-4222-0
Course Length	3.5 Hours

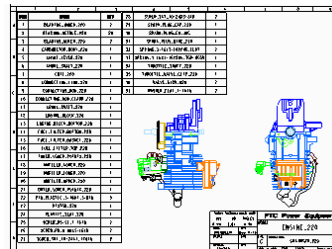
In this course, you will receive a comprehensive review of the Creo View Lite 3.0 functionality. In addition, the content is built to support topic-based course configurations. You will learn about Creo View Lite and its role as a visualization solution for Product Data Management systems. You will also learn how to visualize products and navigate through or query 3-D models, 2-D drawings, images, and documents. Additionally, you will learn how to deconstruct models to view how components fit together. Finally, you will learn how to create markups and save annotation sets to communicate design ideas and problems.

You will complete Pro/FICIENCY skills assessment questions for each topic. These questions are used to help reinforce your understanding of the course topics.



Course Objectives

- Introduction to visualization
- Introduction to the Creo View Lite user interface
- Navigating and orienting 3-D models
- Finding and selecting model components
- Changing model appearances
- Working with model annotations
- Exploding model components
- Sectioning models
- Working with components and groups
- Viewing 2-D drawings, images, and documents
- Creating markups and annotation sets
- Taking measurements



Prerequisites

- Locate and View Information with Windchill ProjectLink 10.2

Audience

- This course is intended for any user who needs to view and manipulate product information in Windchill ProjectLink. People in related roles will also benefit from taking this course.
-

Table of Contents

Module	1	Introduction to Visualization
Module	2	Getting Around in Creo View
Module	3	Viewing and Interrogating Models
Module	4	Deconstructing a Creo View Model
Module	5	Working with Components
Module	6	Viewing Drawings, Images, and Documents
Module	7	Working with Markups and Annotation Sets
Module	8	Working with Construction Geometry

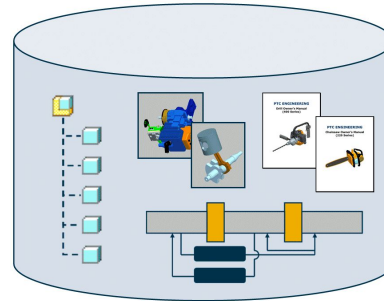
Standard Document Management with Windchill ProjectLink 10.2

Overview

Course Code	WBT-4223-0
Course Length	1 Hour

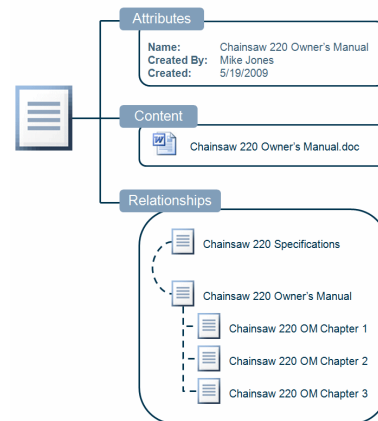
In this course, you will learn the basic skills necessary to perform typical document management tasks using Windchill ProjectLink 10.2. You will also learn document management skills such as creating and modifying documents. This course constitutes a comprehensive review of the Standard Document Management functionality. In addition, the content is built to support topic-based course configurations.

You will complete Pro/FICIENCY skills assessment questions for each topic. These questions are used to help reinforce your understanding of the course topics.



Course Objectives

- Identify the capabilities of a standard document
- Set document preferences
- Create documents
- Create documents from templates
- Modify documents
- Create document relationships



Prerequisites

- Locate and View Information with Windchill ProjectLink 10.2

Audience

- This course is intended for any user who manages documents within Windchill ProjectLink.
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Table of Contents

Module	1	Creating Documents and Links
Module	2	Modifying and Managing Documents

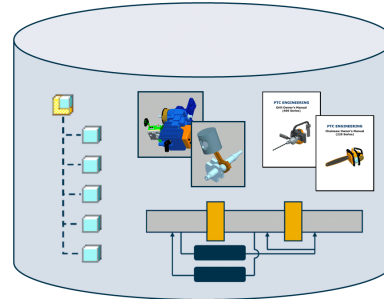
Work Management with Windchill ProjectLink 10.2

Overview

Course Code	WBT-4224-0
Course Length	2 Hours

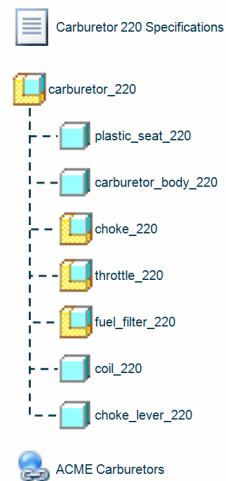
In this course, you will learn how to manage your work, and explore the Windchill communication and collaboration mechanism including packages. This course constitutes a comprehensive review of common Windchill tasks. In addition, the content is built to support topic-based course configurations. You will learn how to participate in Windchill processes and how to manage your tasks. Other miscellaneous topics include managing user preferences and performing common tasks, such as Move, Save As, and Rename. After completing the course, you will be prepared to perform common Windchill tasks, as well as have a better understanding of the Windchill system implementation at your company.

You will complete Pro/FICIENCY skills assessment questions for each topic. These questions are used to help reinforce your understanding of the course topics.



Course Objectives

- Manage your work environment
- Identify Windchill communication and collaboration tools
- Manage Windchill packages
- Participate in workflow processes
- Manage user preferences
- Perform Common Windchill tasks



Prerequisites

- Basic Windchill 10.1 understanding

Audience

- This course is intended for any user who needs to learn about common tasks performed in Windchill.
-

Table of Contents

Module	1	Managing Your Work
Module	2	Communication and Collaboration
Module	3	Participating in Processes
Module	4	Performing Common Tasks
Module	5	Managing Windchill Packages

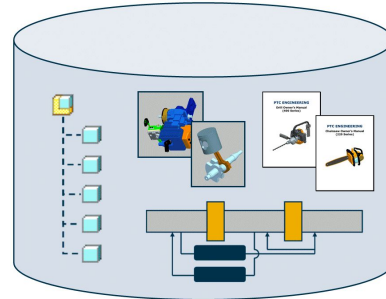
Project Data Management with Windchill ProjectLink 10.2

Overview

Course Code	WBT-4225-0
Course Length	1.5 Hours

In this course, you will learn how to operate as a project manager within the Windchill ProjectLink environment. You will learn about creating projects and you will create activities and milestones that define the project timeline. Additionally, you will learn how to assign ownership responsibility of the activities and milestones to your project's team members as well as update the project phase, status, and timeline. Finally, you will learn how to manage data using Windchill ProjectLink and Microsoft Project. After completing this course, you will be prepared to complete basic Windchill ProjectLink management tasks and activities, and have a greater understanding of Windchill ProjectLink data management processes.

You will complete Pro/FICIENCY skills assessment questions for each topic. These questions are used to help reinforce your understanding of the course topics.



Course Objectives

- Identify steps involved in project management
- Plan projects
- Create projects in Windchill
- Create activities, milestones, and summary activities
- Create project deliverables
- Create and managing action items
- Update projects
- Monitor project timelines
- Use Microsoft Project with Windchill



Prerequisites

- Locate and View Information with Windchill ProjectLink 10.2

Audience

- This course is intended for project managers. People in related roles will also benefit from taking this course.

Table of Contents

Module	1	Introduction to Project Management
Module	2	Implementing Projects
Module	3	Managing Projects
