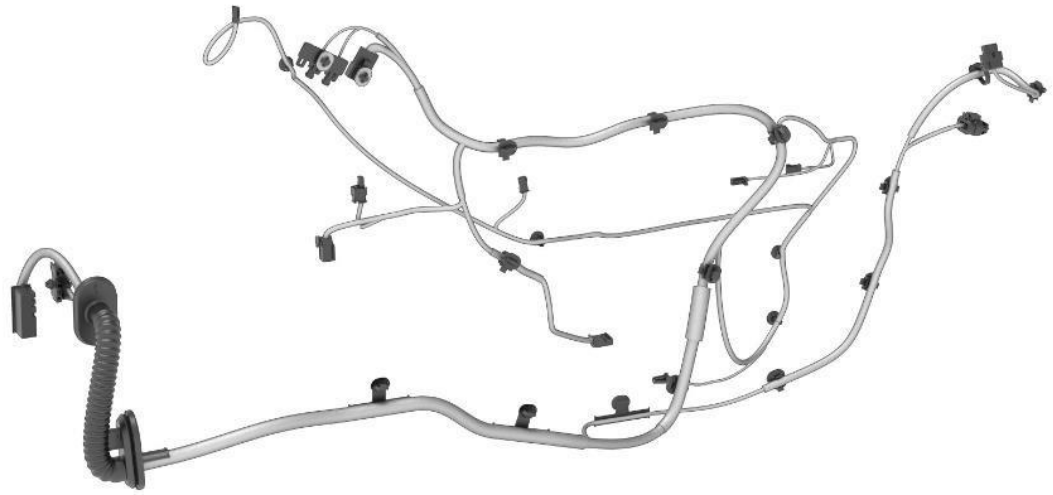
Wiring Harness Design Syllabus



Lecture Details	Topics to be covered

Preface

As an experienced user in the basics of Creo Parametric 10.0/CATIA, this learning guide enables you to create electromechanical cabling systems designed in Creo Parametric/CATIA using the Piping and Cabling Extension. Utilizing the parametric and associative nature of Creo Parametric/CATIA, an electromechanical designer can easily create realistic 3D cabling assemblies, wire lists, bill of material tables, and nail-board drawings. The Creo Parametric 10.0/CATIA Cable and Harness Design learning guide contains numerous practices to give you practical experience that will improve your job performance.
This content was developed using Creo Parametric 10.0/CATIA.

	Topics Covered:
Topics Covered:	• Cabling Process Overview
	• Cabling Terminology
	• Environment and Configuration Setup
	• Electromechanical Model Setup
	• Manual Designation and Parameters
	• Manual Spools
	• Manual Cabling Features
	• Logical Reference Technique
	• Routing Methods
	• Modifying Cabling Assemblies
	• Additional Routing Features

	• Networking	
	• Cabling Assembly Deliverables	
	• HARNESS-MFG	
Chapter 1	**Chapter 1: Process Overview**	
	1.1 Electromechanical Overview	
	• Process Overview	
Chapter 2	**Chapter 2: Overview and Environment**	
	2.1 Cabling Process Overview.	
	• Process Overview	
	2.2 Cabling Terminology.	
	2.3 Create a New Cabling Assembly.	
	2.4 Set Up Environment	
	• Model Tree Use in Cabling.	• Color Settings
Chapter 2	**2.5 Set Up the Configuration File**	
	• Config.Pro	
	Practice 2a Initial Environment Setup.	
Chapter 3	**Chapter 3 : Electromechanical Model Setup**	
	3.1 Placement Models	
	3.2 Electromechanical Models	
	• Electromechanical Model Types	• Entry Ports.
	3.3 Obtaining Models	
	• Manual Creation	• Creo Parametric Connector Library/CATIA
	• Vendor Models	
	3.4 Cable Activation.	
	3.5 Harness Creation.	
	•Create a Harness Part	•Create Harness Subassembly
Chapter 4	**Chapter 4: Designation and Parameters (Manual)**	
	4.1 Manually Designate Models.	
	4.2 Electromechanical Model Parameters	
	4.3 Assign Parameters	
	•Modify Values	•Assigning Values..
	•Add or Delete Values.	
	Practice 4a Manually Designate Models	
Chapter 5	**Chapter 5: Spools (Manual).**	
	5.1 Manual Spool Creation.	
	•Spool Types.	•Cable Stripes.
	•Default Spool Parameters.	
	5.2 Modifying Spools.	
	•Redefining Spools.	•Renaming Spools.
	5.3 Storing and Retrieving Spool Files	
	•Retrieving Spool Files.	•Storing Spool Files.
	Practice 5a Manually Create Spools.	

Chapter 6	**Chapter 6: Cabling Features (Manual)**	
	6.1 Wire, Cable, and Ribbon Features.	
	Practice 6a Manually Create Cabling Features.	
Chapter 7	**Chapter 7: Logical Reference Technique.**	
	7.1 Introduction to Logical References.	
	7.2 Logical Reference Option.	
	•Ref Diagram.	•Clear Reference.
	•Import.	•Compare.
	•Export.	•Update.
Chapter 7	**7.3 Designate Models Using Logical References.**	
	•Manual Designation.	•Auto Designation.
	7.4 Entry Ports from Logical References..	
	7.5 Spools from Logical References..	
	7.6 Cabling Features from Logical References.	
	7.7 Modifying Component Parameters.	
Chapter 8	**Chapter 8: Routing Method.**	
	8.1 Introduction to Routing.	
	8.2 Route Wires and Cables.	
	•Wire/Cable Selection.	•Routing Options
	8.3 Route with Bundles.	
	•Creating Bundles	•Options
	•Creating Bundles On The Fly	
	Practice 8a Manual Routing - No Logical References.	
	Practice 8b Manual Routing - Logical References.	
Chapter 9	**Chapter 9: Modifying a Cabling Assembly.**	
	9.1 Cabling Tab.	
	9.2 Route Group.	
	•Reroute Segment.	•Reroute Location.
	9.3 Modify Menu.	
	9.4 Locations Group	
	9.5 Logical Data and Components Groups.	
	Practice 9a Modify a Cabling Assembly.	
Chapter 10	**Chapter 12: Cabling Assembly Deliverables.**	
	10.1 System Bill of Materials.	
	10.2 Cabling Information.	
	10.3 Location Information.	
	Practice 12a Deliverables.	
	Chapter 13: HARNESS-MFG	
	11.1 HARNESS-MFG Introduction.	
	11.2 HARNESS-MFG File Structure.	
	11.3 Harness Flattening.	
	•Manual Flattening	•Fan Out

Chapter 11	•Auto-Flattening	
	11.4 Model Placement in a Flattened Harness	
	•Manual	•Automatic
	11.5 Modifying a Flattened Harness	
	•Modify	•Twist
	•Move Segment	•Break
	•Bend	•Delete
	11.6 Harness Information	
	•2D-3D Info	•Component
	•Wire List	•Flat Status
	•Branch Info	
	Practice 11a Harness Manufacturing	
Chapter 12	**Chapter 12: Capital Harness XC (2D)**	
	12.1 Creating 2D Drawing	
	• Harness design in XC	• Bundle Adding
	12.2 Add connector and terminal, Splice ,wire , Insulations etc	
	Practice Capital Harness XC (2D)	

Note:-

I. Maximum Holidays allowed to students are 5 in the duration

II. Student should inform first before taking a leave or holiday

III. Every student is bound to complete his course within time limits

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