CREO 11.0 Syllabus

1: INTRODUCTION TO CREO PARAMETRIC

Introduction to Creo Parametric

Parametric Nature

System Requirements

Getting Started with Creo Parametric

Important Terms and Definitions

File Menu Options

Managing Files

Model Tree

Understanding the Functions of the Mouse Buttons

Ribbon

Toolbars

Creo Parametric Browser

Appearance Gallery

Colour Scheme Used in this Book

2: CREATING SKETCHES IN THE SKETCH MODE-I

The Sketch Mode

Working with the Sketch Mode

The Sketcher Environment

Working with a Sketch in the Sketch Mode

Drawing a Sketch Using tools available in the Sketch Tab

Placing a Point

Drawing a Line

Drawing a Centerline

Drawing a Geometry Centerline

Drawing a Rectangle

Drawing a Circle

Drawing an Ellipse

Drawing an Arc

Dimensioning the Sketch

Converting a Weak Dimension into a Strong Dimension

Dimensioning a Sketch Using the Normal Tool

Dimensioning the Basic Sketched Entities

Linear Dimensioning of a Line

Angular Dimensioning of an Arc

Diameter Dimensioning Radial

Revolved Sections

Working with Constraints

Types of Constraints

Disabling Constraints

Modifying the Dimensions of a Sketch

Using the Modify Button

Modifying a Dimension by Double-Clicking on it

Modifying Dimensions Dynamically

Resolve Sketch Dialog Box

Deleting the Sketched Entities

Trimming the Sketched Entities

Mirroring the Sketched Entities

Inserting Standard/User-Defined Sketches

Drawing Display Options

3: CREATING SKETCHES IN THE SKETCH MODE-II

Dimensioning the Sketch

Dimensioning a Sketch Using the Baseline Tool

Replacing the Dimensions of a Sketch Using the Replace Tool

Creating Fillets

Creating Circular Fillets

Creating Elliptical Fillets

Creating a Reference Coordinate System

Writing Text in the Sketcher Environment

Rotating and Resizing Entities

Importing 2D Drawings in the Sketch Mode

4: CREATING BASE FEATURES

Creating Base Features

The Default Datum Planes

Creating a Protrusion

Extruding a Sketch

Revolving a Sketch

Understanding the Orientation of Datum Planes

Parent-Child Relationship

5: DATUMS

Datums

Default Datum Planes Need for

Datums in Modeling Selection

Method in Creo Parametric Datum

Options

Datum Planes

Creating Datum Planes

Datum Axes

Datum Points

Creating Cuts

Removing Material by Using the Extrude Tool

Removing Material by Using the Revolve Tool

6: OPTIONS AIDING CONSTRUCTION OF PARTS-I

Options Aiding Construction of Parts

Creating Holes

The Hole Dashboard

Important Points to Remember While Creating a Hole

Creating Rounds

Creating Basic Rounds

Creating a Variable Radius Round

Points to Remember While Creating Rounds

Creating Chamfers

Corner Chamfer

Edge Chamfer

Understanding Ribs

Creating Trajectory Ribs

Creating Profile Ribs

Editing Features of a Model

Editing Definition or Redefining Features

Reordering Features

Rerouting Features

Suppressing Features

Deleting Features

Modifying Features

7: OPTIONS AIDING CONSTRUCTION OF PARTS-II

Introduction

Creating Feature Patterns

Uses of patterns

Creating Patterns

Deleting a Pattern

Copying Features

New Refs

Same Refs

Mirror

Move

Select

Mirroring a Geometry

Creating a Section of a Solid Model

8: ADVANCED MODELING TOOLS-I

Other Protrusion Options

Sweep Features

Creating Sweep Protrusions

Aligning a Sketched Trajectory to an Existing Geometry

Creating a Thin Sweep Protrusion

Creating a Sweep Cut

Blend Features

Parallel Blend

Rotational Blend

General Blend

Shell Feature

Creating a Constant Thickness Shell

Creating a Variable Thickness Shell 8

Creating Draft Features

9: ADVANCED MODELING TOOLS-II

Advanced Feature Creation Tools

Variable Section Sweep Using the Sweep Option

Swept Blend

Helical Sweep

Blend Section to Surfaces



10: ASSEMBLY MODELING

Assembly Modeling

Important Terms Related to the Assembly Mode

Top-down Approach

Bottom-up Approach

Placement Constraints

Package

Creating Top-down Assemblies

Creating Components in the Assembly Mode

Creating Bottom-up Assemblies

Inserting Components in an Assembly

Assembling Components

Displaying Components in a Separate Window

Displaying Components in the Same Window

3D Dragger

Applying Constraints

Status Area

Placement Tab

Move Tab

Packaging Components

Creating Simplified Representations

Redefining the Components of an Assembly

Reordering Components

Suppressing/Resuming Components

Replacing

Assembling Repeated Copies of a Component

Modifying the Components of an Assembly

Modifying Dimensions of a Feature of a Component

Redefining a Feature of a Component

Creating the Exploded State

References Tab Offset Tab

Explode Line Tab

The Bill of Materials

12: GENERATING, EDITING, AND MODIFYING THE DRAWING VIEWS

The Drawing Mode

Generating Drawing Views Generating the

General View Generating the

Projection View Generating the

Detailed View Generating the

Auxiliary View Generating the

Revolved Section View Generating the

Copy and Align View Generating the

3D Cross-Section View

Editing the Drawing Views

Moving the Drawing View

Erasing the Drawing View

Deleting the Drawing View

Adding New Parts or Assemblies to the Current Drawing

Modifying the Drawing Views

Changing the View Type

Changing the View Scale

Reorienting the Views

Modifying the Cross-sections

Modifying Boundaries of Views

Adding or Removing the Cross-section Arrows

Modifying the Perspective Views

Editing the Cross-section Hatching

13: DIMENSIONING THE DRAWING VIEWS

Dimensioning the Drawing Views

Show Model Annotations Dialog Box

Adding Notes to the Drawing

Adding Tolerances in the Drawing Views

Dimensional Tolerances

Geometric Tolerances

Editing the Geometric Tolerances

Adding Balloons to the Assembly Views

Adding Reference Datums to the Drawing Views

Modifying and Editing Dimensions

Modifying the Dimensions Using the Dimension Properties Dialog Box

Modifying the Drawing Items Using the Shortcut Menu

Cleaning Up the Dimensions

14: OTHER DRAWING OPTIONS

Sketching in the Drawing Mode

Modifying the Sketched Entities

User-Defined Drawing Formats

Retrieving the User-Defined Formats in the Drawings

Adding and Removing Sheets in the Drawing

Creating Tables in the Drawing Mode

Generating the BOM and Balloons in Drawings

15: SURFACE MODELING

Surface Modeling

Creating Surfaces in Creo Parametric

Creating an Extruded Surface

Creating a Revolved Surface

Creating a Sweep Surface

Creating a Blended Surface

Creating a Swept Blend Surface

Creating a Helical Sweep Surface

Creating a Surface by Blending the Boundaries

Creating a Variable Section Sweep Surface Using the Sweep Tool

Creating Surfaces the Using the Style Environment of Creo Parametric

Style Dashboard

Surface Editing Tools Mirroring

the Surfaces Merging the

Surfaces Trimming the

Surfaces Creating the Fill

Surfaces Creating the Intersect

Curves Creating the Offset

Surfaces Adding Thickness to

a Surface

Converting a Surface into a Solid

16: WORKING WITH SHEET METAL COMPONENTS

Introduction to Sheet metal

Invoking the Sheet metal Mode

Introduction to Sheet metal Walls

Creating the Planar Wall

Creating the Unattached Revolve Wall

Creating the Unattached Blend Wall

Creating the Unattached Offset Wall

Creating Reliefs in Sheet metal Components

Creating a Flat Wall

Creating a Twist Wall

Creating an Extend Wall

Creating a Flange Wall

Creating the Bend Feature

Creating the Unbend Feature

Creating the Bend Back

Conversion to Sheet metal Part