

2015

Enhancement@CATIA



30D, Jalan PJS 1/46, Petaling Utama, Petaling
Jaya, 46000 Selangor Darul Ehsan
Tel: +603-7783 3459 | Fax: +603-7781 6818
Email : training@mawea.com.my
Website : www.mawea.com.my





CATIA

THE DIGITAL PRODUCT EXPERIENCE



Contents

Course	Subject	Code	Duration (day)
2.1.2	Enhancement@CATIA		
	Mechanical Design Enhancement	CAT-A04	5
	Surface Design Enhancement	CAT-A05	3

Please do not hesitate to call **MAWEA** at **03-7783 3459** for further info or **FAX to 03-77816818** for registration.

MAWEA INDUSTRIES SDN. BHD. (356204-A)

30D, Jalan PJS 1/46, Petaling Utama, 46000 Petaling Jaya, Selangor, Malaysia.

Tel: +603 - 7783 3459 Fax: +603 - 7781 6818 Email: training@mawea.com.my

www.mawea.com.my





CATIA

THE DIGITAL PRODUCT EXPERIENCE

CATIA V5 TRAINING – MECHANICAL DESIGN EXPERT

Venue : MAWEA TRAINING CENTRE (Petaling Jaya, Selangor)

Date : TBC

Duration/Time : 5 Days (9.00 a.m. to 5.00 p.m.)



Introduction

This course will teach you how to start a complex design project from its specifications (top down approach) and complete it by reusing existing data. It will focus on advanced skills and concepts that enable you to create and analyze complex parts and assemblies.

Objective

- Create a complex model in CATIA V5
- Create and manage a structured model
- Design parts in the context of an assembly
- Re-use existing data to complete assemblies
- Manage relationships between assembled parts
- Analyze and annotate your design



Contents

Introduction

- Understand the Importance of Parent / Child relationships.
- Review the Model Creation Steps.
- Organize the features of the model into various bodies and geometrical sets.

Sharing Information

- Create a Power Copy.
- Create Parameters and Formulas.
- Create a Design Table.
- Create a Catalog.

Design Complex Parts

- Create Advanced Sketch-Based Features.
- Multi Section Solids.
- Create Advanced Drafts.
- Advanced Dress-Up Features.
- Use the Multi-Body Method.
- Create Multi-Model Links.

Assembly Design

- Manage the Product Structure.
- Create Flexible sub-assemblies.
- Analyze the Assembly.
- Create Scenes.
- Create Annotations.
- Generate Reports.

Surface Design

- Create Complex Surface Geometry.
- Perform Operations on Surfaces.
- Solidify the Model.

Contextual Design

- Clarify the Display.
- Create Contextual Parts.
- Create Assembly-Level Features.
- Manipulate the Contextual.
- Save the Contextual Models.

Analyze and Annotate Parts

- Analyze the Part.
- Create 3D Constraints.
- Annotate the Part.

Complex Assembly Design

- Stages in the Process.
- Create a Skeleton Model.
- Create the Published Elements.
- Use the Published Elements.

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CATIA

THE DIGITAL PRODUCT EXPERIENCE



CATIA V5 TRAINING – SURFACE DESIGN EXPERT



Venue : MAWEA TRAINING CENTRE (Petaling Jaya, Selangor)

Date : TBC

Duration/Time : 3 Days (9.00 a.m. to 5.00 p.m.)

Introduction

This course will teach you how to create curves and surfaces using the GSD workbench. You will learn how to analyse the wireframe and surface quality and rectify defects, if any. You will learn to work in a multimodel environment with published surfaces. It will then capitalize on this knowledge and teach you advanced surface creation tools, quality checking and correction techniques, and surface creation in a multi-model environment. This course covers only those Generative Shape Design tools that are specific to the HD2 license.

Objective

- Understand and use the tools in the Generative Shape Design workbench
- Create reference geometry, wireframe geometry and surfaces
- Create a clean topology from a set of surfaces and smooth sharp edges
- Create advanced and parameterized swept surfaces
- Perform advanced surface analysis and gap correction
- Improve the designed geometry's quality and stability
- Create Solids from surfaces



Contents

Introduction to Surface Design

- Introduction to Surface Design
- Generative Shape Design Overview
- Surface Design Workbench Terminology
- Surface Design Workbench General Process

Creating Advanced Wireframe Features

- Creating an Extremum
- Creating a Connect Curve
- Curve Connect Checker
- Smoothing Curves

Creating Wireframe Geometry

- Why create 3D Wireframe Geometry?
- Creating Points, Lines, Planes and Curves in 3D
- Shape Design Common Tools
- Managing Geometrical sets

Creating Advances Swept Surfaces

- Inputs for Sweep
- Creating an Adaptive Swept Surface

Creating Surfaces

- Creating Basic surfaces, swept surface
- Surface Offset from a Reference
- Surface from boundaries
- Multi-Section Surface

Creating Advanced Blending Surfaces

- Types of Blend
- Creating Fillets using Hold Curve and Spine
- Creating Fillets using Law
- Creating a Blend Surface

Performing Operations on the Geometry

- Joining Elements
- Splitting / Trimming
- Creating Fillets
- Transforming, Extrapolating and Disassembling Elements
- Creating a Solid from Surfaces

Surface Analysis

- Curvature Analysis
- Improving Surface Quality

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