Unigraphics NX 7.5
Course Curriculum

INTRODUCTION

PRODUCT REALIZATION PROCESS
Computer Aided Design – CAD
Computer Aided Manufacturing – CAM
Computer Aided Engineering – CAE

GETTING STARTED

OPENING NX7.5 SESSION AND FILES
Mouse Functionality
NX7.5 Gateway
Geometry Selection
User Preferences
Applications

COORDINATE SYSTEMS

USING LAYERS

IMPORTANT COMMANDS/DIALOGS
Toolbars
Transform Functions

FORM FEATURES

OVERVIEW

TYPES OF FEATURES

PRIMITIVES

REFERENCE FEATURES

SWEPT FEATURES
FEATURE OPERATIONS

DRAFTING
OVERVIEW

DRAFTING OF MODELS
Drafting
Dimensioning
Sectional View

SKETCHING

OVERVIEW

SKETCHING FOR CREATING MODELS

FREEFORM FEATURE

OVERVIEW

FREEFORM FEATURE MODELING

ASSEMBLY MODELING

OVERVIEW

TERMINOLOGIES

ASSEMBLY MODELS
Top-Down Approach
Bottom-Up Approach
Mixing and Matching

MATING CONDITIONS

MANUFACTURING

GETTING STARTED WITH MANUFACTURING MODULE
Creation of a Blank
Setting Machining Environment
Operation Navigator
Machine Coordinate System (MCS)
Geometry Definition

CREATING OPERATION AND PARAMETER SETTING
Creating a new Operation
Tool Creation and Selection

PROGRAM GENERATION AND VERIFICATION

OPERATION METHODS

POST PROCESSING

FINITE ELEMENT ANALYSIS

INTRODUCTION
Element shapes and nodes

SOLUTION CREATION
Material Properties
Loads
Boundary Conditions
Meshing

SOLVING AND RESULT SIMULATION
Solving the Scenario
FEA Result
Simulation
CNC COURSE STRUCTURE

1. Operating
   - Introduction to CNC
   - Introduction to Drawing and Instruments
   - CNC Power On and Referencing
   - Operator Panel Introduction
   - Basic Knowledge of Tooling
   - Operator Training with Practical
   - Safety Instructions
   - Preparation for Interviews and Placement Assistance

2. Setting
   - Background of Operating
   - Basic Requirement for Setting
   - Knowledge of Instruments and Drawings
   - Introduction of G-Code and M-Code
   - Tooling Selection
   - Offset Measuring
   - Maintaining Setting Approval Report
   - Training with Practical
   - Safety Instruction

3. Programming
   - Background of Setting
   - Complete knowledge of G-Code and M-Code
   - Advance Study of Instrument and Drawings
   - Advance Tooling Selection
   - Complete CNC Programming
   - Calculation of Co-ordinates with Scientific Calculator
   - Safety Instructions