

Course Name : **Turning Manufacturing Process**

Course Duration : 24 Hrs.

Course Overview

- **Course Description**

- The Turning Manufacturing Process course teaches the use of the Manufacturing application for creating Lathe tool paths.

- **Intended audience**

- This course is intended for Manufacturing Engineers, Process planners, and NC/CNC Programmers who use the NX Turning Manufacturing application.
- The course is taught within the context of an NC/CNC programming session and emphasizes the programming organization and efficiency that the Manufacturing application provides. The purpose of this class is to teach you how to use the Turning software as you would in your work environment.

- **Prerequisites**

- **Education:** Diploma completed or Degree 2nd year completed in any one of following Streams.
 - Aeronautical, Automobile, Industrial, Marine, Mechanical, Mechatronics, Metallurgy, Production and Manufacturing Engineering.
- **Software:**
 - The required prerequisites for the course are:
 - Essentials for NX Designers or self-paced course equivalent
 - NX Manufacturing Fundamentals course or the current CAM Transition course
 - Basic understanding of the Master Model concept
 - A working knowledge of the following:
 - The NX software interface
 - Part file saving conventions
 - Experience as an NC/CNC programmer

- **Course Objectives**

- After successfully completing this course, you will be able to:
 - Create cross-sectional curves for use in defining part and blank geometry.
 - Define part and blank geometry for Turning operations.
 - Create facing, centerline drilling, roughing, grooving, finishing, and threading operations.
 - Visually verify the program by displaying 2D and 3D dynamic material removal.

- Define part geometry for parts mounted at each spindle of a multiple spindle machine.
- Manage the in-process workpiece as it is passed from one spindle to the next.
- Create a program that contains milling and turning operations.
- **Course Contents**
 - Define part and blank geometry
 - Create and retrieve tools
 - Face operations
 - Verification
 - Common options
 - Centerline operations
 - Rough operations – OD
 - Rough operations – ID
 - Finish operations OD and ID work
 - Groove operations
 - Teach Mode operations
 - Thread operations
 - Using multiple spindles
 - Mill-Turn
 - Vertical Turret Lathe
 - Merging Lathes
 - Project activities