

NX CAD Surface Modeling Processes Syllabus

General Information

Description

Surface Modeling Processes course covers the process of how to create freeform parts that update reliably and shift smoothly to the manufacturing application. As a second tier course, Surface Modeling Workflows builds on the tools you deployed as a result of attending the NX CAD Fundamental Workflows course. The real-world experience of the CAM Logic instructors aids students in transferring knowledge gained through this single course to their job resulting in faster time to productivity.

Expectations and Goals

- ❖ Create splines and derived curves used in creating freeform features
- ❖ Analyze curves and faces
- ❖ Build primary surfaces using curves
- ❖ Create freeform shapes by sweeping sections along curves
- ❖ Create transition and blend shapes
- ❖ Extend and offset surface geometry
- ❖ Convert surfaces into solid models.
- ❖ Add draft to molded and cast part models
- ❖ Deform parts using Global Shaping

Intended Audience

This course is for Engineers and designers that need to create, edit, and analyze curves and freeform shapes used in part design.

Prerequisite

Required courses:

- CAD Fundamental Processes

Or: CAD FastStart for Experienced 3D CAD Users

Or: Successful completion of Designing Parts in NX prerequisite assessment on the Learning Advantage (score >70%)

Course Schedule

Day	Description
Monday	Introduction to surface modeling processes; Using 3D curves as construction geometry
	Creating freeform shapes from splines
Tuesday	Using mesh surfaces to define primary features; Styling shapes to build sculpted surfaces
	Sweeping sections to start a design
Wednesday	Building exact geometry to define irregular shapes
	Overbuilding and combining surfaces to build a part
Thursday	Defining transitional geometry between shapes
	Analyzing the quality of freeform geometry
Friday	Using surfaces to add definition to a solid model; Deforming surfaces for manufacturing processes
	Working with raster images; Introduction to reverse engineering

End Result

At the completion of the Surface Modeling Processes class, the student will be able to incorporate freeform features into any part, from product models to complex engineering designs. This task-based process course focuses the student on productive surface modeling techniques that capture design intent. These concepts can be applied in the real world of product development and collaboration. As with each course developed and taught by CAM Logic professionals, this class reinforces our in-depth knowledge of the software's capabilities and instructs the students based on the underlying principles incorporated within the NX product suite.

The CAM Logic Training Difference

Expertise; our certified trainers are all industry experts working on real-world challenges & projects

Knowledge; as specialized experts with Siemens PLM Software NX™, we possess this expertise to help you gain maximum knowledge and retention

Flexibility; we can modify content, timing, and location to meet your specific needs, industry challenges, and compliance requirements

