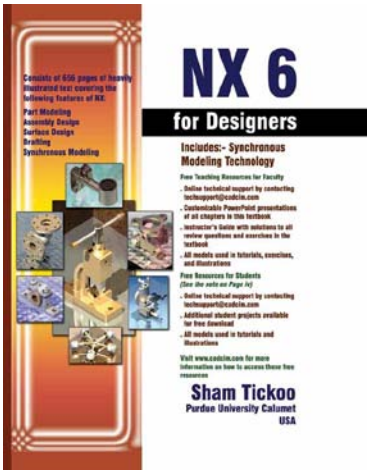
THE CENTER FOR PROFESSIONAL STUDIES



Unigraphics NX7

Organizations that utilize the Unigraphics NX7 Computer Aided Design (CAD) system to develop their products are using a cutting edge system that help analyze, validate and document products utilized throughout the complete product life cycle.

Unigraphics NX7 course covers fundamentals through more advanced features of NX7. Keeping in mind the requirements of the users, the course first introduces sketching and part modeling in NX7, and then gradually progresses to cover assembly and drafting. The course is a series of tutorials and emphasizes hands on exercises and activities. The course provides an excellent introduction to NX7 and sets a strong foundation for gaining skills in more advanced features. The text stands as a valuable resource beyond the scope of the course.

Participants will bring information on specific company projects to be worked on during this training for real application of these concepts, tools and techniques.

- First, every module is covered and they begin with a section that provides a detailed explanation of the commands and tools in Unigraphics NX7.

- Next, the command section is followed by tutorials that are created using these commands. This approach allows the student to use the text initially as a learning tool and then later as reference material.

- Lastly, the students will work on specific projects that show the preferred method of application of Unigraphics NX7 for their job requirements.

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Course Syllabus

I. IDENTIFYING INFORMATION

Course:	Unigraphics NX7
Prerequisite:	Design or Engineering experience Basic computer skills
Time Frame:	40 total contact hours, 5 modules will be covered
Instructor:	Lee Kittredge Lead CAD Instructor 20 years in the CAD field
Mobile:	(248) 844-9090
E-mail:	lee@cpspoly.com

II. REFERENCE MATERIALS

1. NX7 for Designers, by Sham Tickoo and Amol P. Kanthe

III. COURSE GOALS AND OBJECTIVES

1. Understanding NX7 file operations
2. Understanding and use of the NX7 user interface
3. Effective creation and use of sketches
4. Understanding and application of solid modeling
5. Understanding and application of essential design editing techniques

IV. METHODOLOGY

This course provides the solid fundamentals of the CAD tool to prepare the student for more specific and advanced functions. Each module will introduce new material that will prepare the student for the projects to be completed.

Lectures

Each detailed subject will be presented in a lecture format outlining the theory and standardized accepted methodology. A PDF file of the lecture material will be provided for the student's personal use as reference material. Lecture note outlines will be distributed to the students for each lecture to help the student capture personal notes.

In-Class Assignments

Using the theory and industry examples the student will conduct several projects that outline each key principal on in-class projects. These projects will increase in complexity as the students further develop their skills in applying these tools and techniques.

V. COURSE OUTLINE AND ASSIGNMENTS

Module 1: Introduction to NX7

Introduction to NX7	Discussion
User Interface Overview	Discussion
File operations	Discussion
Sketcher Task Environment	Discussion
WCS	Discussion
Creating a Sketch	Discussion
Sketching Tools	Discussion
Chapter 2 Tutorials 1-3, Exercise 1 and 2	Assignment

Module 2: Constraining Sketches

Sketch Options	Discussion
Geometric Constraints	Discussion
Dimensional Constraints	Discussion
Chapter 3 Tutorials 1-3, Exercise 1 and 2	Assignment

Module 3: Solid Modeling I

Sketch Operations	Discussion
Editing Sketches	Discussion
Extrude	Discussion
Revolve	Discussion
Hide/Show	Discussion
Chapter 4 Tutorials 1-3, Exercise 1 and 2	Assignment

Module 4: Datums

Datum Planes	Discussion
Datum Axes	Discussion
Datum Coordinate Systems	Discussion
Chapter 5 Tutorials 1-3, Exercises 1 and 2	Assignment

Module 5: Solid Modeling II

Holes Pre-NX5	Discussion
Holes the New Way	Discussion
Grooves	Discussion
Slots	Discussion
Chamfers	Discussion
Edge Blends	Discussion
Chapter 6 Tutorial 1 and 2, Exercises 1 – 2	Assignment

Module 6: Object Replication

Instance Feature	Discussion
Mirror Feature	Discussion
Mirror Body	Discussion
Sweep Along Guide	Discussion
Tube	Discussion
Threads	Discussion
Chapter 7 tutorials 1-3, Exercises 1 and 2	Assignment

Module 7: Swept Features

Swept Features	Discussion
Helical Gear Project	Assignment
Mouse Cover Project	Assignment
Gasket Project	Assignment

Module 8: Solid Modeling III

Editing Features	Discussion
Editing Position	Discussion
Boss	Discussion
Pocket	Discussion
Pad	Discussion
Draft	Discussion
Chapter 8 Tutorials 1-3, Exercise 1	Assignment

Module 9: Alternative and Legacy Methods

Curves Outside of Sketches	Discussion
Primitives	Discussion
Discussion of Modeling Methods	Discussion
Curves Project	Assignment
Primitives Project	Assignment
Compare and Contrast Project	Assignment

Module 10: NX7 Installation and Configuration

Licensing	Discussion
System Requirements	Discussion
Procedures	Discussion
User Customization	Discussion