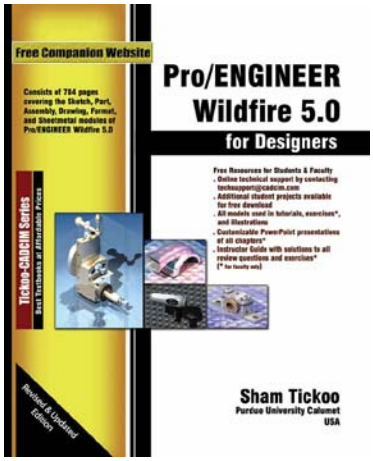
THE CENTER FOR
PROFESSIONAL STUDIES



Pro Engineer

Organizations that utilize the Pro Engineer Wildfire 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.

The Pro Engineer Wildfire course covers fundamentals through more advanced features of Pro Engineer. Keeping in mind the requirements of the users, the course first introduces sketching and part modeling in Pro Engineer, 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 Pro Engineer 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 Pro Engineer Wildfire.

- 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 Pro Engineer Wildfire for their job requirements.

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Course Syllabus

I. IDENTIFYING INFORMATION

Course:	Pro Engineer
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. Pro Engineer Wildfire 4 for Designers, by Sham Tickoo

III. COURSE GOALS AND OBJECTIVES

1. Understanding Pro Engineer file operations
2. Understanding and use of the Pro Engineer 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 Pro Engineer

Introduction to Pro Engineer	Discussion
User Interface Overview	Discussion
File operations	Discussion
Sketch Mode	Discussion
Drawing a Sketch	Discussion
Dimensioning a Sketch	Discussion
Working with Constraints	Discussion
Modifying Dimensions	Discussion
Deleting	Discussion
Trimming	Discussion
Mirroring	Discussion
Palettes	Discussion
Chapter 2 Tutorials 1-3, Exercise 1 and 2	Assignment

Module 2: Sketch Operations

Fillets	Discussion
Splines	Discussion
Text in Sketches	Discussion
Importing Sketches	Discussion
Scaling and Rotating	Discussion
Chapter 3 Tutorials 1-3, Exercise 1 and 2	Assignment

Module 3: Solid Modeling I

Extrude	Discussion
Revolve	Discussion
Default Datum Planes	Discussion
Chapter 4 Tutorials 1-3, Exercise 2 and 4	Assignment

Module 4: Datums

Datum Planes and Axes	Discussion
Datum Points	Discussion
Creating Datums On-The-Fly	Discussion
Chapter 5 Tutorials 1-3, Exercises 2-4	Assignment

Module 5: Solid Modeling II

Holes	Discussion
Rounds	Discussion
Chamfers	Discussion
Ribs	Discussion
Editing Features	Discussion
Chapter 6 Tutorials 1-4, Exercises 1 and 2	Assignment

Module 6: Object Replication

Patterns	Discussion
Copying Features	Discussion
Mirroring Geometry	Discussion
Model Sections	Discussion
Chapter 7 tutorials 1-4, Exercises 1 and 4	Assignment

Module 7: Solid Modeling III

Sweep Features	Discussion
Blend Features	Discussion
Shell	Discussion
Datum Curves	Discussion
Draft Features	Discussion
Chapter 8 Tutorials 1-4, Exercises 1 and 4	Assignment

Module 8: Solid Modeling IV

Variable Section Sweep	Discussion
Swept Blend	Discussion
Helical Sweep	Discussion
Blend Section to Surface	Discussion
Blend Between Surfaces	Discussion
Chapter 9 Tutorials 1-4, Exercise 2	Assignment

Module 9: Deforming Solids

Toroidal Bend	Discussion
Spinal Bend	Discussion
Warp	Discussion
Chapter 10 Tutorials 1 and 3	Assignment

Module 10: Pro Engineer Installation and Configuration

Ordering	Discussion
Installation Procedures	Discussion
Configuration Files	Discussion