THE CENTER FOR PROFESSIONAL STUDIES

SolidWorks for Designers

This introductory course is the foundation of your advancement in the SolidWorks World. After this course the student will be able to successfully build and use Parts, Assemblies, and Drawing Layouts, in the work place. This course will prepare the student for other SolidWorks Training Modules.

➤ First, every module begins with a command section that provides with detailed explanation of the commands and tools in SolidWorks

➤ 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 use it as a reference material.

➤ Lastly, the students will work on specific company projects that show the preferred method of application of SolidWorks at their company.

Course Syllabus

I   IDENTIFYING INFORMATION
Course: SolidWorks for Designers
Prerequisite: Design or Engineering experience
                Basic computer skills (preferable CAD)
Time Frame: 40 contact hours
Instructor: Lee Kittredge
                20 years in the CAD field
Mobile: (248) 844-9090
E-mail: lee@cpspoly.com

II   REFERENCE MATERIALS
1. SolidWorks 2009 for Designers, by Sham Tickoo and Sandeep Premdass

III   COURSE GOALS AND OBJECTIVES
1. Navigate tool bars, pull-down, and mouse control.
2. Create, modify, and repair solid parts.
3. Master the basic features of part creation.
4. Build, control, and analyze assemblies for fit and function.
5. Create exploded assembly views.
6. Create new 2-D drawings and views
7. Create and modify intelligent text,
8. Annotations, and Dimensions

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.

Specific Industry Examples

Real life industry examples will be covered that detail out the application of the theory to demonstrate how different companies apply these tools and techniques. This will give the students a clear understanding of how and why these techniques are utilized to perform their specific job tasks.

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.

Specific Company Application

As a summary of the training we will apply these tools and techniques on a specific company project that is currently in development by the students. This will build a standard methodology on how to appropriately apply Pro Engineer at your company.

V   COURSE OUTLINE AND ASSIGNMENTS

Module 1
Sketch geometry and relations	Discussion
Basic Part modeling	Discussion
Boss and cut extrudes	Discussion
Modeling a casting or forging	Discussion
Projects	Assignment

Module 2
Adding intelligence to solid features	Discussion
Revolves and patterns	Discussion
Complex cylindrical parts and patterns	Discussion
Thin walled parts	Discussion
Projects	Assignment

Module 3
Draft, shells, ribs and text features	Discussion
Configurations of parts	Discussion
Projects	Assignment

Module 4
Design aspects a single part can be in	Discussion
Editing options	Discussion
Editing and repairing features in a part	Discussion
Bottom up assemblies	Discussion
Projects	Assignment

Module 5
Build and analyze for fit and function	Discussion
Detailing	Discussion
Create views, annotations and BOM	Discussion
Support Information	Discussion
Tools options, templates and support	Discussion
Projects	Assignment