

COURSE OUTLINE
Loc Nguyen, 2012

DEPARTMENT:	Professional Technical Education
CURRICULUM:	CAD / DESIGN Technology
COURSE TITLE:	CAD 3-D Parametric Solid Design I
COURSE NUMBER:	TDR 230
TYPE OF COURSE:	Technical Preparatory
COURSE LENGTH:	1 quarter
CREDIT HOURS:	4
LECTURE HOURS:	22
LAB HOURS:	44
CLASS SIZE:	20
PREREQUISITES:	TDR 135 AutoCAD 3-D or Instructor's permission

COURSE DESCRIPTION:

This course explores the three dimensional CAD parametric, solid-modeling design program. Using the 3-D Mechanical design automation software to build parametric models of parts and assemblies, and how to make drawings of those parts and assemblies.

STUDENT LEARNING OUTCOMES ADDRESSED:

1. Communication - Read and translate technical data relative to geometric spatial relationships into a graphical form easily understood by others with similar technical understanding.
2. Computation - Use basic mathematical operations as required defining geometrical spatial relationships.
3. Human Relations - Use social interactive skills to enhance learning through informal tutoring activities.
4. Critical Thinking and Problem Solving - Organize and evaluate technical data, as well as select and apply appropriate spatial relationship principles to determine problem solution.

STUDENT LEARNING OUTCOMES ADDRESSED: (cont.)

5. Technology - Select and use appropriate technological tools to create technical graphics.
6. Personal Responsibility - Take pride in own work
7. Information Literacy - Access & use information from variety of resources / data

GENERAL COURSE OBJECTIVES:

Upon completion of the course the student will be able to:

1. Become familiar with the Microsoft Windows interface and the SolidWorks interface.
2. Understand the basic functionality of SolidWorks software then create and modify the simple parts.
3. Understand how parts and assemblies are related.
4. Place standard Toolbox parts in assemblies. Modify Toolbox part definitions to customize standard Toolbox parts.
5. Understand basic drawing concepts. Create detailed drawings of parts and assemblies.

TOPICAL OUTLINE:

	APPROX. HOURS
I. Course Overview	1
II. Getting to Start and Using Interface	11
III. Drawing Basic 3-D Modeling – Extrude options	12
IV. Drawing Basic 3-D Modeling – Linear & Circular Patterns	12
V. Parts & Assembly Basics	12
VI. Detail Drawings	12
VII. Revolve Parts	<u>6</u>
Total	66

Originated or Revised BY: L. NGUYEN
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