COURSE OUTLINE
Loc Nguyen, 2012

DEPARTMENT:	Professional Technical Education
CURRICULUM:	CAD / DESIGN Technology
COURSE TITLE:	CAD 3-D Parametric Solid Design II
COURSE NUMBER:	TDR 231
TYPE OF COURSE:	Technical Preparatory
COURSE LENGTH:	1 quarter
CREDIT HOURS:	4
LECTURE HOURS:	22
LAB HOURS:	44
CLASS SIZE:	20
PREREQUISITES:	TDR 230 CAD 3-D Parametric Solid Design I

COURSE DESCRIPTION:

This course continues the study of TDR 230 three dimensional CAD parametric, solid-modeling design program. Students will use 3-D SolidWorks to build parametric projects models of parts and assemblies, and make drawings of those parts and assemblies.
Two projects will be assigned by instructor; the third project will be selected by each student. All students are required to present their final project model on the last class day.

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.

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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. Understand the basic functionality of 3-D CAD parametric solid-modeling design software.
2. Create and modify the parts and assembly using the ***Revolve***, ***Sweep***, and ***Loft*** Features.
3. Understand how parts and assemblies are related.
4. Understand basic drawing concepts. Create detailed drawings of parts and assemblies.

TOPICAL OUTLINE:

		APPROX. HOURS
I.	Course Overview	1
II.	Advanced Modeling Topics: Planes Creation	11
III.	Advanced Modeling Topics: Revolve, Sweep and Loft	18
IV.	Surfaces Modeling	12
V.	Design projects	24
	Total	66

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