DEPARTMENT: Professional Technical Education

CURRICULUM: CAD / DESIGN Technology

COURSE TITLE: Intermediate CATIA

COURSE NUMBER: TDR 241

TYPE OF COURSE: Technical Preparatory

COURSE LENGTH: 1 quarter

CREDIT HOURS: 4

LECTURE HOURS: 22

LAB HOURS: 44

CLASS SIZE: 20

PREREQUISITES: TDR 228 CAD Sheet Metal and TDR 240 Into To CATIA or Instructor permission

COURSE DESCRIPTION:

This is an extension of CATIA (Computer Aided Three Dimensional Interactive Application) fundamental course by expanding students skills and techniques to further utilize advanced features of the Computer Based Three Dimensional Modeling. A hands-on course where students produce the parts drawings and assemblies, Surfacing and Sheet metal Drafting.

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 CATIA parametric solid-modeling design software.
2. Understand the terminology and the creation process for sheet metal part design.
3. Define and manage sheet metal part parameters.
4. Understand the GSD (Generative Shape Design) workbench.
5. Create curves or surfaces to improve imported wireframe geometry
6. Understand how to manage parts in the context of an Assembly.
7. Produce CATIA drawings Parts and assembly layouts

TOPICAL OUTLINE:

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<td>III. Generative Sheet Metal Design - SMD</td>
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<td>IV. Introduction to Generative Shape Design</td>
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<td>V. Part Modeling &amp; Assembly</td>
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Originated or Revised BY: L. NGUYEN
DATE: Jan 10, 2010