Alexandria Technical and Community College

MEDR 2601: Product Design (with CAD)

A. COURSE DESCRIPTION
   Credits: 4
   Lecture Hours/Week: 1
   Lab Hours/Week: 3
   OJT Hours/Week: *.*
   Prerequisites:
   This course requires the following prerequisite
   MEDR 1618 - Computer Assisted Drafting 3-D (Number of Years Valid: 5)
   Corequisites: None
   MnTC Goals: None
   Students develop an understanding of complex analysis and design of products. Students dimension and
   design castings, sheet metal and die molded parts, and review the manufacturing processes used in their
   design to achieve good economics. Prerequisite: MEDR1618.

B. COURSE EFFECTIVE DATES: 12/17/1997 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
   1. Determine control limits.
   2. Describe different types of manufacturing operations.
   3. Create assembly drawings.
   5. Describe section views.
   6. Create x-bar and r-charts.
   7. Investigate cost analysis of raw material, labor, and overhead.
   8. Create an injection mold base assembly.
   9. Explain types of assembly drawings.
   11. Examine statistical process control fundamentals.

D. LEARNING OUTCOMES (General)
   1. The learner will analyze the product design cycle.
   2. The learner will analyze and design products using manufacturers' components integrated into the
      design.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted