

_____SOUTH SEATTLE COMMUNITY COLLEGE_____

Technical Professional Division

COURSE OUTLINE

Revision: L. Nguyen May, 2012

DEPARTMENT:	Computer Aided Drafting / Design Technology
CURRICULUM:	Computer Aided Drafting & Design
COURSE TITLE:	CAD Mechanical
COURSE NUMBER:	TDR 179
TYPE OF COURSE:	Technical Preparatory/
COURSE LENGTH:	1 quarter
CREDIT HOURS:	4
LECTURE HOURS:	22
LAB HOURS:	44
CLASS SIZE:	24
PREREQUISITES:	TDR 123 (Drafting Technology II) and TDR 133 or instructor's permission

COURSE DESCRIPTION:

Application of standard drafting practices to produce Mechanical parts, Detail and Assembly production drawings.

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 to define geometrical spatial relationships.
3. Human Relations - Use social interactive skills to enhance learning through informal tutoring activities.

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STUDENT LEARNING OUTCOMES ADDRESSED: (cont.)

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.
5. Technology - Select and use appropriate technological tools to create technical graphics.
6. Personal Responsibility - Value and take pride in one's own skill and work, and manage time to meet required schedules.
7. Information Literacy - Access, evaluate and apply information from technical texts.

GENERAL COURSE OBJECTIVES:

At the end of the course the student will:

1. Describe the usual format for working drawings.
2. Identify the purpose(s), content, and usual location on working drawings for the following:
 - A. Title block
 - B. Parts list
 - C. Revision block
 - D. General notes
 - E. Usage block
3. Apply standard drafting practices to produce working detail drawings, and assembly/installation drawings.
4. Define the characteristic of a spur gear, worm gear, and bevel gear.
5. Calculate the gear ratio and rpm of two mating gears, given the pitch diameters, and draw a spur gear
6. Identify welding symbols used in steel fabrication.

TOPICAL OUTLINE:

APPROX. HOURS

I.	Working drawing assembly/installation	24
II.	Working drawing detail	18
III.	Gearing and Cams	18
IV.	Welding Symbols	<u>6</u>
	Total	66

REVISED BY: L. Nguyen