COURSE OUTLINE
Revision: Loc Nguyen - Date: February 2009

DEPARTMENT:	Drafting Technology
CURRICULUM:	Drafting
COURSE TITLE:	Space Analysis
COURSE NUMBER:	TDR 128
TYPE OF COURSE:	Vocational Preparatory/
COURSE LENGTH:	1 quarter
CREDIT HOURS:	3
LECTURE HOURS:	11
LAB HOURS:	44
CLASS SIZE:	24

PREREQUISITES:

TDR 126 (Space Geometry) or instructor's permission

COURSE DESCRIPTION:

Analysis of complex geometric space relationships. Emphasis on problem-solving techniques.

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.

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.

PROGRAM OUTCOMES ADDRESSED

1 Ability to apply knowledge of mathematics and scientific principles to technical engineering/drafting problems.
2 Ability to analyze and interpret data.
3 Ability to think critically in evaluating information, solving problems, and making decisions.
4 Ability to function on diverse, multi-disciplinary teams.
5 Ability to access and evaluate information from a variety of sources, including the Internet.
6 Understand professional and ethical responsibility.
7 Ability to communicate effectively with written, oral, and visual means.
8 Recognize the need for and ability to engage in life-long learning.
9 Ability to use modern technical engineering techniques, skills, and technology, including computing tools necessary for technical engineering/drafting practice.

GENERAL COURSE OBJECTIVES:

At the end of the course the student will:

1. Demonstrate effective projection techniques using basic drafting tools and media.
2. Apply the principles of third-angle projection and revolutions to determine the following:
   A. True lengths, size, shape and angles.
   B. Intersections of lines and surfaces with complex shapes.
   C. The development of surfaces.
   D. The locus of a line with given angles to two given surfaces.
3. Using #1 and #2 above, solve a variety of spatial relationship problems.

GENERAL COURSE OBJECTIVES (cont.):

4. Correctly use the language of projective geometry to describe and discuss spatial relationship problems and solutions.

TOPICAL OUTLINE:		APPROX. HOURS	TECH PREP CREDITS
I.	Revolutions	16.66	1
II.	Intersections	16.67	1
III.	Developments and locus of a line	16.67	1
IV.	Review and evaluation	5.00	
	Total	55.00	

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