MURRAY STATE UNIVERSITY

DEPARTMENT OF INDUSTRIAL AND ENGINEERING TECHNOLOGY

COURSE NUMBER: ITD 306 CREDIT HOURS: 4

I. TITLE: Engineering Graphics

II. CATALOG DESCRIPTION:
Orthographic projection with an emphasis on auxiliary projection and descriptive geometry. Descriptive geometry theory and techniques are used to solve applied engineering problems. Lecture and laboratory: 6 contact hours. Prerequisites: ITD 101 and ITD 104

III. PURPOSE:
To provide students with an understanding of graphic fundamentals and the ability to apply these fundamentals to solve applied engineering problems.

IV. COURSE OBJECTIVES:
A. To provide basic competencies needed by Engineering Graphics students entering industry with regard to predesign analysis and problem-solving using 2-D and 3-D descriptive geometry.
B. To use 2-D CAD and 3-D parametric CAD modeling applications to illustrate & solve applied descriptive geometry problems.

V. CONTENT OUTLINE:
A. Orthographic Projection
1. Review of basic orthographic projection
2. Introductory and intermediate auxiliary projection
B. Descriptive Geometry
1. Principles and basic concepts of 2-dimensional and three-dimensional descriptive geometry
2. Lines in a three-dimensional space
3. Plane surfaces in a three-dimensional space
4. Three-dimensional spatial relationships of and intersections of lines and planes
5. Rotation of geometric elements in a three-dimensional space
6. Problem solving for industrial technology and applied engineering.

VI. INSTRUCTIONAL ACTIVITIES:
A. Lectures/discussions
B. Demonstrations
C. Individualized and group instruction
D. Laboratory analysis & problem solving cases
1. Practice problems - individual
2. Applied problems – individual and design teams
E. Reference reading assignments

VII. FIELD, CLINICAL, AND/OR LABORATORY EXPERIENCES:
Field trips to regional industries may be utilized to provide observation of modern industrial processes.

VIII. RESOURCES:

IX. GRADING PROCEDURES: (percentages)

Evaluation and performance

A.	Mid-term exam	10%
B.	Performance examinations and quizzes	20%
C.	Daily drawing performance	40%
D.	Contribution to class, work procedures, progress and Preparation	10%
E.	Final Exam (comprehensive)	20%

Grading Scale:

Greater than 92 = A
84 – 91 = B
76 – 83 = C
68 – 75 = D
Less than 67 = E

X. ATTENDANCE POLICY:

This course will adhere to the policy published in the current MSU Undergraduate Bulletin. Each student is expected to be prompt and regular in class attendance. For excused absences, (excused absences are: doctor's note for illness, death in family and MSU academic or athletic sponsored participation) the student must make arrangements with the instructor beforehand or make-up work or exams WILL NOT be provided/accepted. With the third unexcused the student's grade will be decreased by one letter grade and further absences will result in a drop of one-half letter grade each. For the purposes of attendance, three tardies equal one absence. Attendance is recorded at the beginning and sometimes at the end of each class period.

XI. ACADEMIC HONESTY POLICY:

This course will adhere to the policy published in the current MSU Undergraduate Bulletin. Cheating, plagiarism (submitting another person's material as one's own), or doing work for another person which will receive academic credit are all impermissible. This includes the use of unauthorized books, notebooks or other sources in order to secure or give help during an examination; the unauthorized copying of examinations, assignments, reports or term papers; or the presentation of unacknowledged material as if it were the student's own work. Disciplinary action may be taken beyond the academic discipline administered by the faculty member who teaches the course in which the cheating took place.

XII. TEXT AND REFERENCES:

Technical Graphic Communication, 4th Ed., Irwin Publishing Co., Chicago, IL. 2009

XIII. PREREQUISITES:

ITD 101 and ITD 104

XIV. Syllabus Statement of Equal Opportunity:

Murray State University endorses the intent of all federal and state laws created to prohibit discrimination. Murray State University does not discriminate on the basis of race, color, national origin, gender, sexual orientation, religion, age, veteran status, or disability in employment, admissions, or other provision of services and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities equal access to participate in all programs and activities.

B. Siebold, 1/11