

MURRAY STATE UNIVERSITY

DEPARTMENT OF INDUSTRIAL AND ENGINEERING TECHNOLOGY

COURSE NUMBER: ITD 102

CREDIT HOURS: 3.0

I. TITLE: CAD Applications

II. CATALOG DESCRIPTION:

An introductory course with emphasis in multiview projection for mechanical components and the design creation using 3D parametric modeling. No prerequisite, not applicable for ITD/Engineering Graphics majors/minors.

III. PURPOSE:

The purpose of this course will be the study of Computer Aided Design (CAD) systems and their role in the design process. Methodology will be designer oriented instruction on micro CAD systems. Emphasis will be on the planning and operational techniques required to produce drawings on a CAD system.

IV. COURSE OBJECTIVES:

As a result of this course, each student will:

- A. Have an understanding of ANSI standards for multiview projection, drawing organization and layout, and 2-D and 3-D CAD file creation and manipulation .
- B. Develop a familiarity with the concepts, equipment, procedures, and practices of 3-D parametric modeling.
- C. Develop a familiarity with the design process and its integration with parametric technology.

V. CONTENT OUTLINE:

- A. Orientation to microsystem CAD hardware and software
- B. CAD file creation, manipulation and management for mechanical design (including drawing: set-up, layout, creation, editing, dimensioning, saving, plotting)
- C. Introduction to 3-D parametric part modeling
- D. Parametric file creation, manipulation and management. (including: design plan sketching, set-up, layout, profiling, constraining, feature creation and editing, 2-D and 3-D documentation, dimensioning and plotting.)

VI. INSTRUCTIONAL ACTIVITIES:

- A. Assigned readings
- B. Participate in discussions and class activities
- C. Sketching and CAD/Modeling of mechanical parts/geometry
- D. Operate microcad equipment/peripherals

VII. FIELD, CLINICAL, AND/OR LABORATORY EXPERIENCES: N/A

VIII. RESOURCES:

- A. Reading materials from classroom resource center
- B. Technical manuals
- C. Informational handouts, assignment sheets

- D. Layout and design papers
- E. A/V materials
- F. Computer graphics software

IX. GRADING PROCEDURES:

Student's final grade will consist of the total number of points accumulated during the semester.

Class Participation & Attendance	15%
Assignments	65%
Mid-Term Exam	10%
Final Exam	10%

Grading Scale: 90-100% A, 80-89% B, 70-79% C, 60-69% D, Below 60% E.

Unless arrangements are made prior to missing class; make up assignments, tests, and/or quizzes will not be accepted.

Unless otherwise specified, assignments will be due at the beginning of class. Any late assignment(s) are subject to a demotion in grade or a deduction in points; all at the discretion of the instructor.

The instructor retains the right to adjust the grading system to allow for unusual circumstances.

X. ATTENDANCE POLICY:

This course will adhere to the policy published in the current MSU Undergraduate Bulletin. Regular attendance is important. It affects your educational experience in that you have an opportunity to gain from your instructor and your fellow classmates, as well as make a contribution to them. Likewise, your time is generally utilized more efficiently with proper equipment available in the classroom. Be present and prompt as it will affect your grade. Upon the third unexcused absence your grade will be reduced by 1 letter grade and by ½ letter grade for each unexcused absence thereafter. Attendance may be recorded at any time during the class period.

Unless arrangements are made prior to missing class; make up assignments, tests, and/or quizzes will not be accepted.

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:

Reyes, Alejandro. Beginner's Guide to SolidWorks 2011. Schroff Development Corporation, 2006.

XIII. PREREQUISITES:
None

XIV. STATEMENT OF AFFIRMATIVE ACTION AND 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 the 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.

For more information, contact the Director of Equal Opportunity, 103 Wells Hall, (270) 809-3155 (voice), (270) 809-3361 (TDD).

XV. IET – PRINTING POLICY

The network printers in IET are only available to students currently enrolled in a course offered by the Department of IET. Each student starts the semester with a print allocation that is based on the number of pages course instructors have said they need you to print for each class. As a student prints pages this balance automatically declines. If a student prints non-class material it is likely the student will run out of allocated pages before the end of the semester. Each student is responsible for items printed from their account. Additional pages may be purchased through Sharon Crouch (Room IT 263) or Kevin Barrow (Room IT 253-Y). For any technical, print or account related questions, please see Kevin Barrow.

XVI. Note to Students:

The use of any type of email or instant messenger is strictly prohibited during class time. Do NOT use email or instant messenger during class. A break is allowed mid class session. Food or drinks are NOT allowed in the computer labs. Do NOT bring food or drinks into the lab. The use of any tobacco products in the drafting lab or CAD laboratory is strictly prohibited.

Please turn off or silence your cell phone during class time. Do NOT use your cell phone during class; this includes phone calls and text messaging.

Please refrain from Facebook, Twitter, and other internet use that distracts you from learning.

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