

**MURRAY STATE UNIVERSITY**

**DEPARTMENT OF INDUSTRIAL AND ENGINEERING TECHNOLOGY**

COURSE NUMBER: ITD 104

CREDIT HOURS: 4.0

I. TITLE: COMPUTER AIDED DESIGN

II. CATALOG DESCRIPTION:

(For ITD students only) An intermediate course in the theory and practical application of computer aided systems for drafting/design fields. A review of two-dimensional drawing techniques is presented followed by three-dimensional drawing techniques with emphasis on wireframe, surface and solid modeling. An introduction to parametric design is included. This course includes hands-on experience on interactive graphics equipment. Lecture, 2 hours; Laboratory, 4 hours. Prerequisite: ITD 101, ITD 107

III. PURPOSE:

The purpose of this course will be the intermediate study of Computer Aided Design (CAD) systems and their role in the design process. Methodology will be designer oriented instruction on a typical CAD system and 3-D modeling and rendering package. Emphasis will be on the planning and operational techniques required producing wireframe, surface and solid three-dimensional drawings.

IV. COURSE OBJECTIVES:

As a result of participating in this course students will:

- A. Develop an understanding of the use of 2D CAD applications software for mechanical and architectural applications.
- B. Develop an understanding of the use of 3D rendering and modeling applications software for mechanical and architectural applications.
- C. Have developed a measure of skill in the use of equipment needed to perform design functions and produce applied drawings.
- D. Have developed a measure of skill in the use of CAD applications software for mechanical and architectural fields with emphasis in wireframe and solid modeling.

V. CONTENT OUTLINE:

- A. Mechanical
- B. Architectural
- C. Concepts of 3-D modeling.
- D. Wireframe modeling.
- E. Solid Modeling.
- F. Introduction to parametric design.

VI. INSTRUCTIONAL ACTIVITIES:

- A. Participation in discussions and class activities
- B. Sketching and drawing assignments
- C. Operation of computer graphic equipment/peripherals
  - 1. Computer
  - 2. Plotter
  - 3. Laser Jet
  - 4. Color InkJet
- D. CAD and Modeling Software
  - 1. Solidworks 2010

VII. FIELD, CLINICAL, AND/OR LABORATORY EXPERIENCES:  
 Four hour laboratory per week.

VIII. RESOURCES:

- A. Professional publications
- B. Teacher developed materials
- C. University and industrial/business personnel
- D. Audio/Video materials

IX. GRADING PROCEDURES:

- |    |                                  |     |
|----|----------------------------------|-----|
| A. | Midterm Exam                     | 10% |
| B. | Final Exam                       | 10% |
| C. | Assignments                      | 65% |
| D. | Class Participation & Attendance | 15% |

Grading Scale:	90-100	= A
	80-89	= B
	70-79	= C
	60-69	= D
	Less than 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:

Attendance in this class is important for the student to complete his or her work and to receive design consultation and instruction. For necessary absences, the student must make prior arrangements with the instructor, or make-up work or exams WILL NOT be provided or accepted. *With the **fourth** unexcused absence, the student grade will be decreased by one letter grade and further absences will result in a drop of one-half letter grade each. For the purpose of attendance, two tardies equal one absence.* Attendance is recorded at the beginning and sometimes at the end of each class period. The attendance policy is enforced.

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 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:

A. Reyes, Alejandro. Beginner's Guide to SolidWorks 2009. Schroff Development Corporation. Mission, KS

XIII. PREREQUISITES:

ITD 101, ITD 107

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 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.

For information regarding nondiscrimination policies contact the Office of Equal Opportunity, 270-762-3155.

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 Wesley Spencer (Room IT 253-Y). For any technical, print or account related questions, please see Wesley Spencer.

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 Twitter and Facebook use during class time.

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