MURRAY STATE UNIVERSITY

DEPARTMENT OF INDUSTRIAL AND ENGINEERING TECHNOLOGY

COURSE NUMBER: ITD 204 CREDIT HOURS: 3.0

I. TITLE: Parametric Modeling and Rendering

II. CATALOG DESCRIPTION:
An intermediate course in the theory and practical application of computer aided design. Emphasis will be on the planning and operational techniques required producing parametric models with corresponding photo-realistic renderings. This course includes hands-on experience on interactive graphics equipment. Lecture: 2 hours and Laboratory: 3 hours. Prerequisites: ITD 101 and ITD 104 or 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 three-dimensional drawings and photo-realistic renderings.

IV. COURSE OBJECTIVES:
As a result of participating in this course students will:
A. Develop an understanding of the use of 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 with corresponding photo-realistic renderings.
D. Have developed a measure of skill in the use of CAD applications software for mechanical and architectural fields with emphasis in 3-D modeling and rendering.

V. CONTENT OUTLINE:
A. Commands related to parametric modeling using SolidWorks.
B. Concepts of 3-D parametric modeling using SolidWorks.
C. Photo-realistic Rendering – Revit.
D. Fundamentals of Kitchen Design with 20/20

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. Laser Jet
3. Color InkJet
4. Scanner
5. Adobe Premier
6. CAD Software

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

VIII. RESOURCES:

Series of video tapes and notes on Virtual Reality

IX. GRADING PROCEDURES:

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

A. 3D Exercises - Solidworks

• Parametric Solid Modeling	70%
• Design Projects	30%
• Final Project	10%

B. 20/20 Exercises

• Exercises	70%
• Project – L-Kitchen and Mod	5%
• Project – U Kitchen and Mod	5%
• Project - Kitchen	10%
• Project - Bathroom	10%

Revit Exercises

• Exercises	70%
• Project – Lake Cabin	10%
• Project - Casework	10%
• Final Project	10%

X. ATTENDANCE POLICY:

This course will adhere to the policy published in the MSU Undergraduate Bulletin. 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 third 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, three tardies equal one absence. Attendance is recorded at the beginning and sometimes the end of each class period.

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:

"20/20" by 20/20

Residential Design Using AutoDESK Revit by Stine

XIII. PREREQUISITIES:

ITD 101 and ITD 104 or 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 270-809-3155.

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