#### MURRAY STATE UNIVERSITY

## DEPARTMENT OF INDUSTRIAL AND ENGINEERING TECHNOLOGY

ITD 401-01 12:30 PM-3:15 PM TTH CREDIT HOURS: 4

I. TITLE: Architectural Drafting and Design – Multi-Family & Light Commercial Projects.

#### II. CATALOG DESCRIPTION:

Fundamental principles of designing and drawing construction documents for light commercial buildings. Architectural programming, building code analysis, site analysis, budgetary considerations, design principles, building methods, material selection, and drawing resulting in a package of contract documents for construction. Lecture and laboratory – six contact hours. Prerequisites: ITD101, 104, 301 or equivalent.

#### III. PURPOSE:

To instruct students in the knowledge and skills of producing Contract Documents for the construction of multi-family and light commercial architecture.

#### IV. OBJECTIVES:

- A. Learn the standards of a select group of program elements common to a commercial building
- B. Learn requirements of accessibility for a commercial building
- D. Learn portions of the building and plumbing code for commercial occupancies
- E. Develop and enhance graphic skills by utilizing BIM software
- F. Learn project specifications as a requirement of contract documents
- G. Investigate the application of sustainable construction products
- H. Learn habit of sourcing published standards and product literature

## V. CONTENT OUTLINE:

- A. Using REVIT to draw a commercial building
  - a. Common design spaces for a commercial office project
    - i. Parking
    - ii. Lobby
    - ii. Restrooms
  - b. STINE workbook project
  - c. Accompanying lectures for commercial design
- B. Overview of the architectural design topics
  - a. Presentation drawings vs. construction drawings
  - b. Design process a short version
  - c. Architectural Programming
  - d. Site Analysis
  - e. Codes
  - f. Budgets and materials

- C. Designing and drawing a small commercial retail building as a case example
- D. Student design project
  - a. Design note/sketch/photo book
  - b. Final project presentation
- E. Specifications
  - a. Sustainable design strategies
  - b. Green building products

## VI. INSTRUCTIONAL ACTIVITIES:

- A. Lectures
- B. Individual project consultations
- C. Classroom demonstrations and discussions
- D. Outside reading assignments

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

A. Field trip if possible

# VIII. RESOURCES:

- A. REVIT software by Autodesk
- B. MASTERPSEC
- C. Industry Associations (AIA, ASID & CSI)
- D. Green sources on the internet
- F. Supplies needed
  - 1. 3-ring binder notebook for notes and handouts

## IX. GRADING PROCEDURES:

Grades will be calculated based on the following criteria:

Projects and Assignments	45%
Exams	25%
Design Idea Notebook	5%
Final Design project	25%

## Grade Scale:

90-100%	Α
80-89%	В
70-79%	С
60-69%	D
0-59%	Ε

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. Attendance will be recorded for each class period. 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.

#### XI. ACADEMIC HONESTY POLICY:

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. Stine, Daniel John, <u>Commercial design Using Autodesk Revit Architecture</u> 2012, Schroff Developemtn Corporation, 2011
- B. (reference) Americans with Disabilities Accessibility Guidelines. Available online at:

  http://www.access-board.gov/adaag/html/adaag.htm
- C. (reference) <u>Architectural Graphic Standards</u>, Student edition. New York: John Wiley and Sons, 2000. ISBN: 0-471-34817-1.

# XIII. PREREQUISITES

A. ITD101, 104, 301 or equivalent.

## 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. CLASS POLICIES:

- 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.
- Please turn off cell phones by the beginning of class. Use of cell phones during class period is strictly prohibited.
- 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 studio or CAD laboratory is strictly prohibited.

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