

COURSE OUTLINE

Architecture 160
Architectural Computer Aided Drafting Laboratory

I. **Catalog Statement**

Architecture 160 provides practice using computer-aided drafting (CAD) software. Students will complete architecture-related projects of their own choosing to further develop their CAD skills. Students will also improve their architectural design skills by completing increasingly complex architectural projects.

Units – 2.0

Lecture Hours – 0.0

Total Laboratory Hours – 6.0

(Faculty Laboratory Hours – 6.0 + Student Laboratory Hours – 0.0 = 6.0 Total Laboratory Hours)

Prerequisite: Architecture 250 or Engineering 109 or equivalent.

II. **Course Entry Expectations**

Skills Level Ranges: Reading 5; Writing 5; Listening/Speaking 5; Math 3.

Prior to enrolling in the course, the student should be able to:

1. utilize the computer system to complete a series of basic design problems;
2. complete a series of problems demonstrating their basic knowledge and skills in utilizing a computer aided drafting system;
3. complete a series of architectural drafting problems using the Revit software;
4. create three-dimensional models, renderings, and construction documents for a residential and commercial design project.

III. **Course Exit Standards**

Upon successful completion of the required coursework, the student will be able to:

1. use current Windows based computer-aided design software (AutoCAD, Autodesk Revit Architecture, or other comparable software) to accomplish various drafting and design assignments in an architectural format;
2. gain additional knowledge of computer-aided design software;
3. complete practice assignments of students' own choosing;
4. complete a printed or digital portfolio of various drawings/projects.

IV. **Course Content**

Total Contact Hours = 96

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| A. Introduction to Course | 3 hours |
| 1. Selection of projects | |
| 2. Review of computer aided design software fundamentals | |
| B. Laboratory Practice Using Computer Aided Design Software | 93 hours |

V. **Methods of Presentation**

The following instructional methodologies may be used in the course:

1. lecture;
2. multi-media;
3. guest speakers;
4. individual and group projects;

VI. **Assignments and Methods of Evaluation**

The following assignments and methods of evaluation may be used in this course:

1. project proposal (i.e. the student will complete a written description of the projects to be completed during the course).
2. individual project critique (i.e. the projects that have been completed will be critiqued by the instructor).
3. final portfolio (i.e. the student will assemble the completed drawing projects and provide a short written description of each).
4. final portfolio critique (i.e. the student's portfolio will be critiqued by the instructor).

VII. **Textbooks**

Stine, S., Residential Design Using Revit® Architecture 2012, Current edition.
Mission, KS: Schroff Development Corporation, 2011.
10th Grade Textbook Reading Level. ISBN: 978-1-58503-675-2.

Wakita, O., The Professional Practice of Architectural Working Drawings, Current edition. New York: John Wiley and Sons, 2011.
10th Grade Textbook Reading Level. ISBN: 0-470-61815-9.

VIII. **Student Learning Outcomes**

1. The student will use current Windows based computer-aided design (AutoCAD, Autodesk Revit Architecture, or other comparable software) to accomplish various drafting and design assignments in an architectural format.
2. The student will complete practice assignments of the student's own choosing in their area of interest.
3. The student will complete a printed or digital portfolio of their various drawings/projects.