Class Hours: 3.0  Credit Hours: 4.0
Laboratory Hours: 3.0  Date Revised: Spring 03

NOTE: This course is not designed for transfer credit.

Catalog Course Description:

An introduction to architectural drafting. The course will use CAD software to teach the basic elements of architectural drafting. The students will produce a set of architectural drawings that will include floor plan, site plan, building section, wall section and elevations. The computer will also be used to calculate quantities and produce reports.

Entry Level Standards:

Basic knowledge of a CAD application such as AutoCAD or Microstation is required.

Prerequisites:

IDT 1350 and 1500 for IDT majors; CID 1104 for non-majors

Corequisites:

College-level math for IDT majors; MATH 1730 or 1731 for CID majors;

Textbook(s) and Other Reference Materials Basic to the Course:

Textbook:
Reading Architectural Working Drawings (Prentice Hall)
The Autodesk Architectural Desktop 3 Book (Prentice Hall)
Reference:
Architectural Graphic Standards (McGraw-Hill)
Sweets Building Products Catalog & Sweets On-line
Standard Building Code (Southern Building Code Congress International, Inc.)

Materials:
1. Notebook
2. Architectural scale
3. 3.5” or ZIP disks
4. Graph paper

I. Week/Unit/Topic Basis:

Week  Topic
1  Class objectives and organization; Login procedures for computer; Introduction to Architectural drawing concepts; Basic CAD commands and environment settings
Architectural symbols
Schematic plans and plan basics
Floor plans: wall placement, modifications, & manipulations, dimensions, title block
Placing doors, windows, kitchen components
Stairs and plumbing fixtures
Wall section, dimensions, leaders, text
Site plan; topography, property lines, easements, roads, utilities
Floor plans: structural components
Foundation/footing plans
Building sections, 3D models
Elevations: introduction and layout
Elevations: continued
Complete drawings in progress
Complete drawings in progress
Final Exam; Complete drawings, plot all drawings as set, turn in notebook

II. Course Objectives*:

A. Develop skills and knowledge necessary to convey basic information required by the building industry. II, V, VI, VIII

B. Have a basic knowledge of material symbology and equipment symbols and applications. VI, VIII

C. Be able to produce an Architectural drawing on the computer. V, VI, VIII

D. Have knowledge of basic building material sizes and applications. V, VI

E. Have knowledge of resource materials. V, VI

F. Have basic understanding of specifications. VI

G. Have basic understanding of other computer applications such as word processors and databases. V, VII

*Roman numerals after course objectives reference goals of the CID program.

III. Instructional Processes*:

Students will:

1. Use the "graphic primitives" to generate common symbols used in the construction industry. *Technological Literacy Outcome*
2. Import graphic files, scale to standard industry requirements and use to generate standard construction details. *Numerical Literacy Outcome, Problem Solving and Decision Making Outcome, Technological Literacy Outcome*

3. Use standard industry reference materials in electronic format and hardcopy. *Technological Literacy Outcome, Information Literacy Outcome*

4. Use CAD applications to initiate, document, revise and resubmit typical architectural drawings. *Technological Literacy Outcome, Personal Development Outcome*

5. Generate three-dimensional model using architectural application software. Use model to verify construction processes. *Technological Literacy Outcome, Problem Solving and Decision Making Outcome*

6. Use three-dimensional model to generate 2D drawing for production drawings. *Problem Solving and Decision Making Outcome, Technological Literacy Outcome*

7. Use dimensioning tools to completely and properly dimension final drawings as well as use annotation tools to completely annotate final drawing. *Technological Literacy Outcome, Numerical Literacy Outcome*

8. Use word processor and spreadsheet to generate reports and memos and calculations. *Communication Outcome, Technological Literacy Outcome, Numerical Literacy Outcome, Information Literacy Outcome*

9. Use CAD application to generate plots according to industry standards. *Technological Literacy Outcome, Communication Outcome, Numerical Literacy Outcome, Transitional Strategy*

10. Complete a basic set of architectural drawings of professional quality. *Personal Development Outcome, Technological Literacy Outcome*

*Strategies and outcomes listed after instructional processes reference Pellissippi State’s goals for strengthening general education knowledge and skills, connecting coursework to experiences beyond the classroom, and encouraging students to take active and responsible roles in the educational process.*

**IV. Expectations for Student Performance***:

Upon successful completion of this course, the student should be able to:

1. Produce basic drawings required for construction. A-F

2. Demonstrate the relationship of the different plan views. A,C

3. Demonstrate the relationship of plans, sections, and details. A

4. Demonstrate the relationship of drawings, schedules, and specifications. A,B,C,D

5. Introduce the concept of modular coordination used by the building industry. C, D

6. Use the computer to reinforce the relational concept or architectural drawings. A,C

7. Use ANSI standards for text & dimensions A,C

8. Use reference materials (product literature, tables, charts and example drawings). E,G
9. Use codes (state and local). E
10. Reinforce skill required for board drawings. A
11. Use computer to produce set of architectural drawings. A,C
12. Plot set of drawings for evaluation. C
13. Expose students to process of design. C,D,E
14. Use computer to write reports and proposals. E,G

*Letters after performance expectations reference the course objectives listed above.

V. Evaluation:

A. Testing Procedures:

There will be 3-4 quizzes given in addition to homework assignments. Quizzes, reports, homework & notebook will account for 30% of the grade.

B. Laboratory Expectations:

Laboratory exercises will include a minimum of the following (other drawings may be assigned by the instructor):
1. Architectural symbols
2. Schematic plans
3. Site plan
4. Foundation plan
5. Floor plan
6. Building section
7. Wall section
8. Elevations
9. Accessing Internet
10. Accessing building code

Laboratory time is required but will NOT be sufficient to complete the assignments.

C. Field Work:

The student will be expected to research additional resources (library, films, professionals, professional documents, staff, etc.).

D. Other Evaluation Methods:

N/A

E. Grading Scale:

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<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>90-100</td>
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<tr>
<td>B+</td>
<td>85-89</td>
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<tr>
<td>B</td>
<td>80-84</td>
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<tr>
<td>C+</td>
<td>75-79</td>
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<tr>
<td>C</td>
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<tr>
<td>D</td>
<td>60-69</td>
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<tr>
<td>F</td>
<td>59 and below</td>
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VI. Policies:
A. Attendance Policy:

Pelissippi State Technical Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of Academic and Student Affairs, may have requirements that are more stringent.

B. Academic Dishonesty:

It is expected that students will work together to solve problems, however students are expected to go their own work unless specifically assigned otherwise. Sharing or copying others work is un-ethical and will be discounted. A pattern of un-ethical behavior will result in the student being expelled from the class. Copying software will be considered theft.