

PELLISSIPPI STATE COMMUNITY COLLEGE  
MASTER SYLLABUS

ARCHITECTURAL DRAWING WITH AUTOCAD W/LAB  
CET 1310

**Class Hours: 3.0**

**Credit Hours: 4.0**

**Laboratory Hours: 3.0**

**Revised: Fall 2013**

**Catalog Course Description:**

An introduction to architectural drafting. The course will use AutoCAD 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:**

CET 1100

**Textbook(s) and Other Course Materials:**

Textbook:

Reference:

*Architectural Graphic Standards* (McGraw-Hill)  
*Sweets Building Products Catalog & Sweets On-line*  
*International Building Code (IBC)*  
*Arcat.com*

Materials:

1. Notebook
2. Architectural scale
3. Digital storage media

**I. Week/Unit/Topic Basis:**

<b>Week</b>	<b>Topic</b>
1	Class objectives and organization; Login procedures for computer.
2	Architectural drawing concepts; CAD commands and standards for Architectural drafting
3	Architectural material symbols
4	Accessing reference information on Internet

- 5 Floor plans and relationship of the different plans
- 6 Annotation as applied to Architectural drafting
- 7 Sections as applied to Architectural drafting; Building sections and wall sections
- 8 3 Views as applied to Architectural drafting; Elevations, Roof plan.
- 9 Codes and other legal requirements
- 10 Using Word and Excel to communicate and document
- 11-14 Organization and output of documents required for construction
- 15 Final Exam; Complete drawings, plot all drawings as set, turn in notebook

## **II. Engineering Technology General Outcomes (Educational objectives)**

- I. Apply basic engineering theories and concepts creatively to analyze and solve technical problems
- II. Utilize with a high degree of knowledge and skill equipment, instruments, software, and technical reference materials currently used in industry.
- III. Communicate effectively using developed writing, speaking, and graphics skills.
- IV. Assimilate and practice the concepts and principles of working in a team environment.
- V. Obtain employment within the discipline or matriculate to a four year program in engineering or industrial technology

## **III. Engineering Technology Concentration Competencies\***

Students will:

- A. Apply the knowledge, techniques, skills, and modern tools for the concentration of study to specifically defined engineering technology activities
  - B. Demonstrate the knowledge of mathematics, science, engineering and technology to engineering technology problems using developed practical knowledge
  - C. Conduct and report the results of standard tests and measurements, and conduct, analyze and interpret experiment or project results
  - D. Function effectively as a member of a technical team
  - E. Identify, analyze and solve specifically defined engineering technology-based problems
  - F. Employ written, oral and visual communication in a technical environment
- At the program level all 6 competencies apply to roman numerals I – V of the Engineering Technology General Outcomes (Educational objectives) listed above.

## **IV. Course Goals\*:**

**The course will**

1. Cover skills and knowledge necessary to convey basic information required by the building industry. (A,B)
2. Cover basic knowledge of material and equipment symbology, sizes, and applications. (A)
3. Cover the production of Architectural drawings on the computer using AutoCAD. (A,F)
4. Introduce basic resource materials used by the construction industry. (A)
5. Cover basic commands and uses of other computer applications such as word processors and databases. (A,F)
6. Introduce professional office practices and standards. (A,F)
7. Introduce detailing and aesthetic design concepts. (A,F)

\*Capital letters after course goals reference the competencies of the Engineering Technology concentrations listed above.

#### **V. Expected Student Learning Outcomes\*:**

Students will be able to:

- a. Produce basic drawings required for construction with AutoCAD. (1,2,3,6)
- b. Demonstrate an understanding of the relationship of the different plan views. (1)
- c. Demonstrate an understanding of the relationship of plans, sections, and details. (1,6)
- d. Demonstrate an understanding of the relationship of drawings, schedules, and specifications. (1,6)
- e. Demonstrate an understanding of the uses of building materials. (1,2,6)
- f. Demonstrate a knowledge of standard material and equipment sizes. (1,2)
- g. Use ANSI standards for text & dimensions (1,3,4,6,7)
- h. Use reference materials (product literature, tables, charts and example drawings). (1,4,6)
- i. Use codes (state and local). (4,6)
- j. Analyze and select appropriate framing members for simple buildings. (2,4,6)
- k. Use computer to produce set of architectural drawings. (6,7)
- l. Plot set of drawings for evaluation. (6)
- m. Use visual hierarchy concepts and industry standards to reinforce the communication of design intent. (7)
- n. Use computer to write reports and proposals. (5)
- o. Complete assignments in a professional, timely manner. (6)

\*Numbers after Expected Student Learning Outcomes reference the course goals listed above.

## **VI. Evaluation:**

### A. Testing Procedures:

Tests, quizzes, timed drawings can be used at the instructor's discretion.

### B. Laboratory Expectations:

Drawings will be assigned for completion as laboratory exercises. These drawings will comprise the majority of student's grade.

Reports and other assignments will be assigned for completion as laboratory exercises.

NOTE: Laboratory assignments cannot be completed during the scheduled class times. Students will be expected to schedule laboratory times to complete 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:

A	90-100
B+	85-89
B	80-84
C+	75-79
C	70-74
D	60-69
F	59 and below

## **VII. Policies:**

### A. Attendance Policy:

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning 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 Affairs, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of Academic Affairs.

### B. Academic Dishonesty:

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices:

- Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments.
- Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services,

without proper documentation of the original source.

- Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one's own work.
- Taking an exam for another student.
- Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
- Any of the above occurring within the Web or distance learning environment.

Please see the Pellissippi State Policies and Procedures Manual, Policy 04:02:00 Academic/Classroom Conduct and Disciplinary Sanctions for the complete policy.

C. Accommodations for disabilities:

Students that need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by sending email to [disabilityservices@pstcc.edu](mailto:disabilityservices@pstcc.edu), or visiting Goins 127, 132, 134, 135, 131. More information is available at <http://www.pstcc.edu/sswd/>.

D. Other Policies:

**Safety and Equipment Abuse:**

Repeated safety violations will result in a reduction of final grade, at the instructor's discretion. Flagrant violations which result in equipment damage or personal injury could result in automatic failure of the course