PELLISSIPPI STATE COMMUNITY COLLEGE
MASTER SYLLABUS

ARCHITECTURAL 3D MODELING W/LAB
CID 2112

Class Hours: 3.0       Credit Hours: 4.0
Lab Hours: 3.0       Revised: Fall 2010

Catalog Course Description:

An architectural modeling and drafting class using AutoDesk’s Architectural Desktop. The course will use Architectural Desktop to model walls, doors, windows, floor planes, roof, kitchen appliances, bathroom fixtures and other components of a building. The student will generate dimensioned plans, sections, elevations and wall sections from the 3D digital model. Students will also create a digital walk-through and rendered images of the model.

Entry Level Standards:

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

Prerequisites:

CID 1210 or consent of instructor.

Textbook(s) and Other Course Materials:

Textbook:

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. Digital storage media

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Class objectives and organization, Log-in procedures for computer. Review of Architectural drawing concepts, Basic CAD commands and environment settings.</td>
</tr>
<tr>
<td>2</td>
<td>Architectural Desktop environment, pallets, commands, projects, placing and modifying walls</td>
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<tr>
<td>3</td>
<td>Overview Project; Elements, Constructs, Views, Sheets; Introduction to projects &amp; drawing sheets for plans, elevations, sections.</td>
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II. Course Objectives*:

The course will:

A. Use Architectural Desktop to draw/model a building. (I,II,III,IV)

B. Demonstrate how material sizes, equipment requirements and codes requirements affect buildings. (I,II)

C. Organize drawings and files using industry standards. (II)

D. Define and modify parametric relationship of a database and virtual model. (I,II)

E. Use virtual model to generate standard drawings required by industry. (I,II)

F. Use the virtual model to analyze and verify design and code requirements. (I)

G. Develop knowledge of resource materials. (II)

H. Use other computer applications such as word processors and databases. (II,IV)

*Alphabet letters after course objectives reference Engineering Technology Program Educational Outcomes.

III. Expected Student Learning Outcomes*:

The student will be able to:

1. Use CAD/Modeling application to create floor plans with doors, windows, appliances, and plumbing fixtures. (A,D,E)
2. Create virtual model combining foundation plan, floor plans, roof plans. (A,C,D)

3. Analyze the relationship of the various 3-D model components according to materials construction practices, aesthetic appeal and codes. (A,B)

4. Use parametric database to manipulate and modify walls, slabs & roofs components. (B,D)

5. Research and use reference materials (product literature, tables, charts and example drawings). (G,H)

6. Annotate drawings according to ANSI standards for text & dimensions. (A,E)

7. Create a rendered image of the 3D model of a building with materials, light sources and simple paths. (A,E)

8. Use AutoCAD Layout environment to organize and a set of architectural drawings. (C,E)

9. Use word processing and spreadsheet applications to write reports, memos and spreadsheet. (G,H)

10. Create hardcopy prints and digital prints of drawings/models. (E,H)

* Capital letters after Expected Student Learning Outcomes reference the course goals listed above.

IV. 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:

A portfolio of students work will be submitted

E. Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90-100</td>
</tr>
<tr>
<td>B+</td>
<td>85-89.9</td>
</tr>
<tr>
<td>B</td>
<td>80-84.9</td>
</tr>
<tr>
<td>C+</td>
<td>75-79.9</td>
</tr>
</tbody>
</table>
V. 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 the Learning Division, 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 the Learning Division.

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.

C. Accommodations for disabilities:

Students who 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 going to Goins 127, 132, 134, 135, 131 or by phone: 539-7153 or TTY 694-6429. More information is available at www.pstcc.edu/departments/swd/.