PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE
MASTER SYLLABUS

ADVANCED AUTOCAD II
CID 2250

Class Hours: 3.0                   Credit Hours: 4.0
Laboratory Hours: 3.0              Date Revised: Fall 2001

NOTE: This course is not designed for transfer credit.

Catalog Course Description:

A continuation of training in the use of AutoCAD. This course will cover the customization of AutoCAD menus, Lisp routines, solid modeling with Designer and animation/rendering concepts.

Entry Level Standards:

Must have college level English and math skills

Prerequisite:

CID 2150

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

Required Text:
Customizing AutoCAD Sham Tickoo (Autodesk Press)

Reference:
Harnessing AutoCAD 2000 Thomas A. Stellman, and G.V. Krishnan (International Thomson Publishing)

Technical Drawing 10th ed. Giesecke, Mitchell, Spencer, Hill, Dygdon, Novak and Lockhart (Prentice Hall) or later version

Supplies:
Zip disks (2 or more) or 3.5 Floppy disks (a couple of boxes)

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Review of AUTOCAD solid modeling commands</td>
</tr>
<tr>
<td>2</td>
<td>Menus, Customizing AutoCAD</td>
</tr>
<tr>
<td>3</td>
<td>Menus, Customizing AutoCAD</td>
</tr>
<tr>
<td>4</td>
<td>Materials editor, lights, camera, and basic rendering options</td>
</tr>
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<td>Materials editor, lights, camera, and basic rendering options</td>
</tr>
<tr>
<td>6</td>
<td>Advanced modeling, including solids, wireframes, edgesurf, intersections, splines, external references, and regions.</td>
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</tbody>
</table>
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Using Inventor – solid modeling, assembly and advanced modeling, sheet metal modeling

Using Inventor – solid modeling, assembly and advanced modeling, sheet metal modeling

Engineering Drafting

Engineering Drafting

Project

Project

Project

Project

Final Exam

II. Course Objectives*:

A. Create and use solid models in AutoCAD and Inventor. II, V, VI

B. Create basic rendering and animation schemes. II, III

C. Understand the use of a programming language for changing menus, lisp files and creating macros. II, III, V, VI

D. Use other computer applications to communicate in a professional environment. V

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

III. Instructional Processes*:

Students will:

1. Create mechanical parts and assembly drawings. Technological Literacy Outcome, Active Learning Strategy

2. Utilize database commands. Technological Literacy Outcome, Active Learning Strategies

3. Create 3D drawings. Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Active Learning Strategies

4. Demonstrate knowledge of the basic Autolisp commands. Technological Literacy Outcome, Active Learning Strategies

5. Modify the menus. Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Active Learning Strategies

6. Create and manipulate shaded images and animations. Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Active Learning Strategies, Transitional Strategy
7. Generate a report and proposals using a word processor and other software as required. Use the computer for interactive communication. Communication Outcome, Active Learning Strategy, Technological Literacy Outcome, Numerical 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. Create 3-dimensional models of mechanical parts. A
2. Demonstrate knowledge of drawing, dimensioning and modifying commands to create 2-d mechanical drawings. A
3. Create 3-dimensional models of mechanical parts. A
4. Convert 3-dimensional models to the required orthographic 2-d drawings. A
5. Modify or create a new toolbar. C
6. Setup Cameras, lights, and decide on rendering method. B
7. Create, edit and save script files. C
8. Set user preferences. C
9. Communicate using various systems in a workman like manner. D

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

V. Evaluation:

A. Testing Procedures:

The purpose of this class is both to provide for more complex drawings and to demonstrate the possibilities of using programming in CAD management. Students will be evaluated on the correctness of their drawings, a final set of working drawings and on their ability to use the Autolisp language.

B. Laboratory Expectations:

Daily assignments: 65%

C. Field Work:

Quizzes and Homework: 10%

D. Other Evaluation Methods:

Final project: 25%

E. Grading Scale:

A 90-100
VI. Policies:

A. Attendance Policy:

Pellissippi 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 do 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.