PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE
MASTER SYLLABUS

ADVANCED AUTOCAD II
CID 2255 (formerly CID 2250)

Class Hours: 3.0  Credit Hours: 3.0
Laboratory Hours: 1.0  Revised: Spring 05

Catalog Course Description:
A continuation of training in the use of AutoCAD. This course will cover other applications offered by Autodesk.

Entry Level Standards:
Must have college level English and math skills

Prerequisite:
CID 2155

Textbook(s) and Other Course Materials:

Required Text:
Customizing AutoCAD Sham Tickoo (Autodesk Press)

Reference:
Harnessing AutoCAD 2004 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:
Storage Media for Computer files

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1-14</td>
<td>Over the 14-week semester, the following topics will be covered: Review of AUTOCAD solid modeling commands Menus, Customizing AutoCAD Materials editor, lights, camera, and basic rendering options Advanced modeling, including solids, wireframes, edgesurf, intersections, splines, external references, and regions. Sheet metal modeling Engineering Drafting Project</td>
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<tr>
<td>15</td>
<td>Final Exam Period</td>
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II. Course Objectives*:
A. Create and use solid models in AutoCAD and Inventor. (a, b, c, d, e, f, g, h, k)

B. Create basic rendering and animation schemes. (a, b, c, d, e, f, g, h, k)

C. Understand the use of a programming language for changing menus, lisp files and creating macros. (b, c, e, f, g, h, k)

D. Use other computer applications to communicate in a professional environment. (c, e, f, g, h, k)

*Letters (a-k) reference the CID Program Outcomes (as required by ABET).

III. Instructional Processes*:

Students will:

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

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

3. Create 3D drawings. Communication 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. Communication Outcome, Technological Literacy Outcome, Active Learning Strategies

6. Create and manipulate shaded images and animations. Communication 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 TBR’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:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90-100</td>
</tr>
<tr>
<td>B+</td>
<td>85-89</td>
</tr>
<tr>
<td>B</td>
<td>80-84</td>
</tr>
<tr>
<td>C+</td>
<td>75-79</td>
</tr>
<tr>
<td>C</td>
<td>70-74</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:

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:

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. In addition to other possible disciplinary sanctions that may be imposed as a result of academic misconduct, the instructor has the
authority to assign either (1) an F or zero for the assignment or (2) an F for the course. Note: It is expected and desirable that CID students assist other students. However, students may only submit work completed by themselves.

C. Accommodations for disabilities:

If you need accommodation because of a disability, if you have emergency medical information to share, or if you need special arrangements in case the building must be evacuated, please inform the instructor immediately. Privately after class or in the instructor's office. To request accommodations students must register with Services for Students with Disabilities: Goins 127 or 131, Phone: (865) 539-7153 or (865) 694-6751 Voice/TDD.

D. Other Policies:

Equipment:
Students are expected to take utmost care when using equipment provided by Pellissippi State. No tobacco use, eating, drinking will be allowed in labs. Students are not to load unauthorized software on the computers. Do not use floppy disks for CAD drawings in any other computers other than in CID labs. Students are responsible for maintaining current copies of drawings on their disks. Do not relocate computers, monitors, digitizers or keyboards without supervision by an instructor. Do not copy, delete or move files without instruction by an instructor.