

PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE
MASTER SYLLABUS

**TECHNICAL ILLUSTRATION W/LAB
CID 1110**

Class Hours: 3.0

Credit Hours: 4.0

Laboratory Hours: 3.0

Revised: Fall 05

Catalog Course Description:

A coverage of basic sketching skills and the communication concepts of describing physical objects graphically through the use of line drawings, techniques of shade and dimensional representation using perspective methods. The student will learn how to represent an object, building or other shapes using freehand sketching and orthographic projection methods such as isometric, diametric, trimetric and perspective projection methods. Both one-point and two-point perspectives will be covered.

Entry Level Standards:

Must have college level English and math skills.

Prerequisites:

CID 1100

Textbook(s) and Other Course Materials:

Textbook:

Teach Yourself Photoshop 7 in 21 Days, Sams Rose ISBN: 0672323885

Reference:

Drawing on the Right Side of the Brain

Fundamentals of Technical Drawing, Giesecke, Mitchel, Spencer & Hill, MacMillan.

Materials:

Sketchbook

Soft lead pencils (b, 2b, or 3b)

Kneaded eraser

Drafting equipment used in CID 1100

Graph paper: Isometric & Orthographic

Tracing paper

Pens

Notebook

I. Week/Unit/Topic Basis:

Week	Topic
1	Class Objectives, pre-instruction drawings, and examples
2	Graphic Problem Solving
3	Sketching edges, relationships of edges, spaces, light/dark
4	Research & collect examples of sketching solutions

- 5 Projections defined: 3rd Angle, 1st Angle, Isometric, Diametric, One Point Perspective, Two Point Perspective
- 6 Board drawings of 3rd Angle, Isometric, Diametric & One Point Perspective.
- 7 Use of CAD in illustration drawing
- 8 Raster images from scans, file conversions and other resources
- 9 Using Photoshop
- 10 Developing HTML documents
- 11 Developing depth in drawings
- 12 Visual organization of drawings, reports and HTML documents
- 13 Distribution methods; plotting, printing, Acrobat & Web
- 14 Developing project as a team
- 15 Drawing revisions, completing drawings; Final drawings and exam

II. Course Objectives*:

- A. Communicate in sketch form. (g)
- B. Understand Parallel projections; 1st Angle, 3rd Angle, Isometric, Dimetric and Oblique drawings. (a)
- C. Basic understanding of one & two point perspective drawings. (a, g)
- D. Use graphics as a problem solving process. (a)
- E. Collect & evaluate examples of illustration drawing. (c, i)
- F. Use CAD application for illustration drawing. (a,b,g)
- G. Use scanner to convert hardcopy drawings and images to raster images. (a,b)
- H. Convert CAD drawings to raster images. (b,c,d)
- I. Be familiar with visual cues and organization concepts. (g)
- J. Be familiar with drawing organization concepts. (a,f)
- K. Be familiar with use of illustrations in technical communications. (a,g)
- L. Use computer 'paint' application to enhance graphic images. (b,d,g)
- M. Use images in text documents. (b,d,g)
- N. Develop basic HTML pages. (b,c,d,f,g)
- O. Use of raster textures and patterns. (a,b,g)
- P. Work as a team member within team defined standards and results. (e)

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

III. Instructional Processes*:

Students will:

1. Use freehand drawing to examine and represent real objects. *Technological Literacy Outcome*
2. Use freehand drawing to solve problems. *Technological Literacy Outcome, Active Learning Strategy*
3. Work as a team member with other students to produce drawings. *Communication Outcome, Active Learning Strategy, Information Literacy Outcome, Transitional Strategy*
4. Use traditional broad drawing concepts and skills to produce three view, oblique and isometric drawings. *Technological Literacy Outcome, Active Learning Strategy*
5. Use CAD applications to generate three view, oblique, isometric & perspective drawings. *Technological Literacy Outcome, Active Learning Strategy*
6. Use Adobe Photoshop to enhance images. *Technological Literacy Outcome, Active Learning Strategy*
7. Use freehand sketching techniques to enhance traditional drawing presentation *Technological Literacy Outcome, Active Learning Strategy*
8. Use CAD application to generate plots according to industry standards. *Technological Literacy Outcome, Active Learning Strategies, Transitional Strategies*

*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. Complete freehand drawing of basic geometry. A,D
2. Analyze objects and break them down into basic forms. A,D
3. Examine proportions and represent them graphically. A,D
4. Use drawing as a problem solving tool. A,B,D
5. Construct isometric, diametric and oblique drawings using traditional techniques. B
6. Use drawing as a data collection tool. A,D
7. Recognize the different projection methods. B
8. Construct isometric, diametric, oblique & perspective drawings with a CAD application. B

9. Convert CAD drawings to raster images. D,F,G,H
10. Use scanner to convert hardcopy images to raster images. E,G,O
11. Use Photoshop to enhance line drawings. F,G,H,I,L,O
12. Use Photoshop to develop textures and patterns. O
13. Evaluate different viewpoints for perspectives. C,D,I
14. Evaluate and apply highlights for perspective drawing. A,C,I,K,L
15. Analyze and apply textures for perspective drawing. C,G,I,O
16. Create HTML documents with links, background and raster images. L,NO,P
17. Draw, print and assemble models. F,P
18. Use Acrobat as technical communication tool. H,J
19. Critique own work and classmates work. E,I,P

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

V. Evaluation:

A. Testing Procedures:

Quizzes may be given at instructor's discretion. A final test or project will be given.

B. Laboratory Expectations:

1. Exercises and projects require laboratory attendance.
2. It is expected that many assignments will have to be completed outside of class time.
3. Many exercises and projects will consist of drawings, which must be completed outside of scheduled class times. This is known as homework.
4. The student will be graded on participation in lab, completion of assignments and skill development (improvement).

C. Field Work:

1. The student will be required to observe and represent "real life" situations.
2. The student will be expected to research additional resources (library, professionals, staff, etc.)
3. The student will be required to collect photographs and drawings from other sources.

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

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 (Pellissippi State Catalog). 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 accommodations 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. Please see the instructor privately after class or in his/her 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 or 131 or by phone: 694-6751(Voice/TTY) or 539-7153.