PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE
MASTER SYLLABUS

MAINTENANCE PRINTREADING APPLICATIONS W/LAB
MET 1060

Class Hours: 2.0   **Credit Hours: 3.0**

Laboratory Hours: 3.0   **Date Revised: Spring
00**

Catalog Course Description:

An introduction to printreading and mathematical applications in the maintenance field. The
purpose of the course is to introduce specialized blueprint reading needed for maintenance workers,
with a review of asssociated math skills and operations.

Entry Level Standards:

None

Prerequisites:

None

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

Textbook:
Mathematics for Machine Technology: Smith, Delmar Publishers, 3rd Edition,
1990.
Blueprint Reading for Industry: Brown, Goodheart-Willcox Company, 1988
References:
Blueprint Reading For The Machine Trades: Schultz, Prentice-Hall, 1981.
Machine Trades Blueprint Reading: Yearling, Prentice-Hall, 1983.

I. Week/Unit/Topic Basis:

Week	Topic
1	Applied Mathematics
2	Applied Mathematics (cont.)
3	Applied Mathematics (cont.)
4	Basic Blueprint Reading
5	Basic Blueprint Reading (cont.)
6	Basic Blueprint Reading (cont.)
7	Maintenance Math Applications
8	Maintenance Math Applications (cont.)

9	Maintenance Math Applications (cont.)
10	Maintenance printreading and applications
11	Maintenance printreading and applications (cont.)
12	Maintenance printreading and applications (cont.)
13	Schematics and specialized prints
14	Schematics and specialized prints (cont.)
15	Schematics and specialized prints (cont.)
16	Printreading applications project

II. Course Objectives*:

A. Apply mathematical concepts of algebra and trigonometry to industrial production and manufacturing requirements. I, II

B. Explain blueprint reading principles as applied to the production, use, and interpretation of a variety of common drawing types. I, II

C. Recognize, identify, and interpret the various components of maintenance prints, documents, and schematics. I, II

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

III. Instructional Processes*:

Students will:

1. Actively listen to class lectures and participate in class discussions that develop and reinforce an understanding of the theories, concepts, principles, and applications of trigonometry and algebra required in an industrial environment. *Communication Outcome, Problem Solving and Decision Making Outcome, Numerical Literacy Outcome, Active Learning Strategies*

2. Read, interpret, explain, evaluate, and analyze hydraulic and pneumatic diagrams by replicating circuits on hydraulic and pneumatic test stands to increase problem solving skills. *Communication Outcome, Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Numerical Literacy Outcome, Active Learning Strategies*

3. Analyze, tabulate, and present collected data in an orderly format to prepare a college level technical report using computer software packages such as AutoCAD, Microsoft Word, Word Perfect, Excel, EZ-Feature Manufacturing Software, Data Myte Statistical Process Control, Ziess-Numerex Coordinate Measuring software, MD Solids, Working Model 2D. *Communication Outcome, Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Numerical Literacy Outcome, Information Literacy Outcome, Active Learning Strategies, Transitional Strategy*

*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. Convert, and apply the concepts of English and Metric units. A

2. Evaluate and solve basic algebraic equations. A

3. Evaluate and solve problems using plane geometry and trigonometric functions. A

4. Define, explain, and associate the terminology used in blueprint reading. B

5. Identify and interpret the symbols used in blueprint reading. B

6. Interpret various views and types of drawings. B

7. Identify supplementary information contained on drawings. B

8. Identify and interpret machining specifications. B

9. Locate and extract needed information from technical manuals. C

10. Associate and apply the basic principles of applied mathematics and blueprint reading to maintenance prints and documents. C

11. Use prints and schematics to locate maintenance problem areas. C

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

V. Evaluation:

A. Testing Procedures:

Quizzes--25 points
Approximately 6-10 quizzes will be administered during the course. They will include discussion questions, short answer questions, true/false questions, and problem solving .
Exams--45 points
Exam 1: Applied Mathematics--15 points
Exam 2: Basic Blueprint Reading--10 points
Exam 3: Maintenance prints and schematics--10 points
Exam 4: Maintenance printreading project--10 points

B. Laboratory Expectations:

20 points--Problem-solving sessions which include problems from the text and reference material. Problem-solving sessions which include the use of prints and schematics to locate and solve problems.

C. Field Work:

N/A

D. Other Evaluation Methods:

Participatio--10 points
Based on instructor observation during the course, each student will be evaluated on participation activities. Evaluation parameters to include active participation in team

discussions, being prepared, efficient use of lab time, striving to achieve more than minimum requirements, and regular attendance.

E. Grading Scale:

A	92-100
B+	88-91
B	83-87
C+	79-82
C	74-78
D	65-73
F	Below 65

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:

Cheating on a quiz or assigned project will not be tolerated. First offense will result in immediate dismissal and automatic failure of the course. Assistance from other students is encouraged during the learning stages of the course, but each student is responsible for completing their own course assignments.

C. 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 will result in automatic failure of the course.
Counseling: Counseling is available during posted office hours or by appointment.