PELLISSIPPI STATE COMMUNITY COLLEGE
MASTER SYLLABUS

PREVENTIVE MAINTENANCE & SCHEDULING
MET 2050

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

Laboratory Hours: 3.0   **Revised: Fall 2010**

Catalog Course Description:

An introductory course in scheduled and monitored preventive maintenance techniques. Topics include types of maintenance, inspection and inspection intervals, computerized maintenance management systems (CMMS), determining craft skills, parts and scheduling requirements for PM tasks. Lab work consist of development of PM workflow diagrams, task sheets and inspection guides for mechanical drives, fluid power systems, and electrical/ electronics inspections.

Entry Level Standards:

Students must be proficient in the basics of the engineering technology concentration or prior approval of the MET Coordinator

Prerequisites:

MET 2022 and MET 2030

Textbook(s) and Other Course Materials:

 Textbook: *Preventive Maintenance*, Terry Wireman, 2008, Industrial Press, Inc.: New York**.** ISBN: 978-083113300-9

I. Week/Unit/Topic Basis:

Week	Topic
1-2	Course Introduction Types of Maintenance
3	Inspection and Inspection Intervals
4-5	Preventive Maintenance (PM) Scheduling Computerized Maintenance Management Systems (CMMS)
6-7	Development of PM Work Flow Diagrams and Task Sheets
8-9	Determining Craft Skills, Parts, and PM Scheduling Requirements
10-13	Development of Inspection Guides for: Mechanical systems Fluid power systems Electrical/electronics inspections

| 14 | Project Presentations |
| 15 | Project Critique, Student Course Critique, Final Exam Period |

II. Course Goals*:

The course will:

A. Guide students to identify different types of maintenance procedures. (I, III)

B. Guide students to define and explain equipment-based inspection intervals. (I, II, III)

C. Enhance effectiveness in preparing an outline of a basic PM schedule. (I-V)

D. Expand student understanding of developing a PM Work Flow Diagram and Task Sheets. (I-V)

E. Guide students to identify and explain PM scheduling requirements. (I-V)

F. Enhance effectiveness to analyze and develop equipment inspection guides. (I-V)

G. Enhance effectiveness in preparing a report and present a basic PM plan. (I-V)

* Roman numerals after course goals reference goals of the Engineering Technology Program

III. Expected Student Learning Outcomes*:

The student will be able to:

1. identify different types of maintenance procedures. (A)

2. define and explain daily, weekly, monthly, semi-annual, and annual inspection intervals. (B)

3. outline a basic PM schedule using MS Project software. (C)

4. identify and utilize Computerized Maintenance Management Systems (CMMS) components. (C)

5. develop PM workflow diagram using MS PowerPoint. (D)

6. develop Task Analysis sheets using MS Word "Table" functions. (D)

7. determine craft skills and knowledge sets. (E)

8. determine parts inventories and procurement requirements. (E)

9. develop inspection guides for mechanical systems. (F)

10. develop inspection guides for fluid power systems. (F)

11. develop inspection guides for electrical/electronics inspections. (F)

12. Prepare a comprehensive technical report based on individual and collaborative effort. (G)

13. prepare an oral presentation using Microsoft PowerPoint through individual and collaborative effort. (G)

14.   deliver oral presentation using proper speech techniques. (G)

15.   utilize computer based word-processing, spreadsheet, and discipline related software. (G)

16.   develop, analyze, edit, and complete a project in a teaming environment. (G)

17.   demonstrate ability to function as an active and effective team member. (G)

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

IV. Evaluation:

The instructor will provide guidelines and requirements for each section of evaluation. Total evaluation is based on the following point distribution.

A. Testing Procedures:

Unit Exams   (30 Points)
Individual Projects (Outline, Flow Diagram, Task Sheets)   (30 Points)
Team Projects (Presentation, Report)   (40 Points)

B. Laboratory Expectations:

N/A

C. Field Work:

N/A

D. Other Evaluation Methods:

N/A

E. Grading Scale:

Final grade for this course will be based on the following alphabetical/numerical scale:

A	93-100
B+	88-92
B	83-87
C+	79-82
C	74-78
D	65-73
F	Below 65

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/

D. Other Policies:

Safety and Equipment Abuse: Repeated safety violations will result in a reduction of final grade, at the instructor's discretion. Flagrant violations that result in equipment damage or personal injury will result in automatic failure of the course.