

GENERAL INFORMATION			
Name: Diane King	Phone #: 77021		
Course Prefix/Number: ETI 2416C	Course Title: Power Plant Machines and Components 1		
Number of Credits: 4			
Degree Type	<input type="checkbox"/> B.A. <input type="checkbox"/> B.S. <input type="checkbox"/> B.A.S <input type="checkbox"/> A.A. <input checked="" type="checkbox"/> A.S. <input type="checkbox"/> A.A.S. <input type="checkbox"/> C.C.C. <input type="checkbox"/> A.T.C. <input type="checkbox"/> V.C.C		
Date Submitted/Revised: 11-1-2007	Effective Year/Term: 2007-2		
<input checked="" type="checkbox"/> New Course Competency <input type="checkbox"/> Revised Course Competency			
Course to be designated as a General Education course (part of the 36 hours of A.A. Gen. Ed. coursework): <input type="checkbox"/> Yes <input type="checkbox"/> No			
The above course links to the following General Education Outcomes: <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Communication  <input type="checkbox"/> Numbers / Data  <input checked="" type="checkbox"/> Critical thinking  <input type="checkbox"/> Information Literacy  <input type="checkbox"/> Cultural / Global Perspective               </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Social Responsibility  <input type="checkbox"/> Ethical Issues  <input type="checkbox"/> Computer / Technology Usage  <input type="checkbox"/> Aesthetic / Creative Activities  <input type="checkbox"/> Environmental Responsibility               </td> </tr> </table>		<input checked="" type="checkbox"/> Communication <input type="checkbox"/> Numbers / Data <input checked="" type="checkbox"/> Critical thinking <input type="checkbox"/> Information Literacy <input type="checkbox"/> Cultural / Global Perspective	<input type="checkbox"/> Social Responsibility <input type="checkbox"/> Ethical Issues <input type="checkbox"/> Computer / Technology Usage <input type="checkbox"/> Aesthetic / Creative Activities <input type="checkbox"/> Environmental Responsibility
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<b>Course Description (limit to 50 words or less):</b>  This course is designed for students who are preparing for careers in industrial and/or power plant mechanical maintenance. Students learn the principles, concepts, and applications of various mechanical systems encountered in industrial applications, how to identify basic systems and components encountered in power plants, how to troubleshoot equipment problems, and basic procedures involved in maintaining and replacing component parts. Prerequisite: ETI1870. Laboratory fee. A.S. degree credit only. (2 hr lecture; 4 hr lab)			
Prerequisite(s): ETI1870	Co requisite(s): none		

Course Competencies:

Competency 1: The student will demonstrate an understanding of the purpose and operation of diesel motors by:

1. Discussing the operational principles of diesel motors.
2. Identifying the components of a diesel motor.
3. Describing the uses of diesel motors in a power plant.
4. Explaining common malfunctions of a diesel motor.
5. Discussing safety measures involved in diesel repair and maintenance.
6. Performing troubleshooting activities on a diesel motor.
7. Repairing basic malfunctions common to diesel motors.
8. Replacing parts and components of a diesel motor.

Competency 2: The student will demonstrate an understanding of the purpose and operation of turbines by:

1. Discussing the operational principles of turbines.

**Revision Date:** 11-12-2007

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2. Identifying the components of a turbine.
3. Describing the uses and functions of turbines in a power plant.
4. Explaining common malfunctions of turbines.
5. Discussing safety measures involved in the repair and maintenance of turbines.
6. Performing troubleshooting activities on turbines.
7. Repairing basic malfunctions common to turbines.
8. Replacing parts and components of a turbine.

Competency 3: The student will demonstrate an understanding of the purpose and use of filters, strainers, and screens by:

1. Identifying the types of filters, strainers and screens used in a power plant.
2. Explaining common defects, indicators of wear, or malfunctions of filters, strainers and screens.
3. Discussing safety measures involved in working on filters, strainers and screens.
4. Performing troubleshooting activities on filters, strainers and screens.
5. Replacing filters, strainers and screens.

Competency 4: The student will demonstrate an understanding of the purpose and use of fans by:

1. Identifying the types of fans used in a power plant.
2. Explaining common defects, indicators of wear, or malfunctions of fans.
3. Discussing safety measures involved in the maintenance and replacement of fans.
4. Performing troubleshooting activities on fans.
5. Replacing fans.

Competency 5: The student will demonstrate an understanding of the purpose and use of coupling and drive components by:

1. Identifying the types of coupling and drive components used in a power plant.
2. Explaining common defects, indicators of wear, or malfunctions of coupling and drive components.
3. Discussing safety measures involved in the maintenance and replacement of coupling and drive components.
4. Performing troubleshooting activities on coupling and drive components.
5. Replacing coupling and drive components.

Competency 6: The student will demonstrate an understanding of the purpose and use of heat exchangers by:

1. Identifying the types of heat exchangers used in a power plant.
2. Listing and describing the function of heat exchanger components.
3. Explaining common defects, indicators of wear, or malfunctions of heat exchangers.
4. Discussing safety measures involved in the maintenance and replacement of heat exchanger components.
5. Performing troubleshooting activities on heat exchangers.
6. Replacing heat exchanger components.

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