

GENERAL INFORMATION			
Name: Diane King	Phone #: 77021		
Course Prefix/Number: ETI 2451C	Course Title: Mechanical Maintenance for Power Plants		
Number of Credits: 3			
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:	Effective Year/Term: 2007-3		
<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 checked="" 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 type="checkbox"/> Communication <input checked="" 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 checked="" type="checkbox"/> Computer / Technology Usage <input type="checkbox"/> Aesthetic / Creative Activities <input checked="" type="checkbox"/> Environmental Responsibility </td> </tr> </table>		<input type="checkbox"/> Communication <input checked="" 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 checked="" type="checkbox"/> Computer / Technology Usage <input type="checkbox"/> Aesthetic / Creative Activities <input checked="" type="checkbox"/> Environmental Responsibility
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Course Description (limit to 50 words or less, must correspond with course description on Form 102): This course is designed for students who are preparing for mechanical and industrial maintenance operations. Students learn how to read and interpret drawings and blueprints, the application of lubrication principles, how to perform torque procedures, and the correct procedures for maintaining sealants, o-rings, and gaskets in power plant environments. Prerequisite: ETI2416C. Laboratory fee. A.S. degree credit only. (2 hr lecture; 2 hr lab)			

Course Competencies:

Competency 1: The student will demonstrate an understanding of drawings and blueprints by:

1. Identifying energy sources to be isolated as part of a work boundary, when given prints.
3. Interpreting isometric drawings.
4. Interpreting symbols.
5. Identifying directions of flow on piping diagrams.
6. Interpreting various types of drawing including: cutaway, pictorial, orthographic projections, isometric, and others.
7. Interpreting dimension and tolerances of mechanical parts.
8. Sketching mechanical parts with dimensions.
9. Identifying control wiring drawings.

Competency 2: The student will demonstrate an understanding of lubrication principles used in a power plant by:

1. Describing the need for lubrication in mechanical systems.
2. Identifying types of lubricants and their uses.
3. Following industry and plant procedures.
4. Demonstrating the safe handling, storage, and disposal of bulbs.

Revision Date: 10-08-2007

Approved By Academic Dean Date: _____

Reviewed By Director of Academic Programs Date: _____

Competency 3: The student will demonstrate an understanding of threaded bolting and connections by:

1. Identifying different types and grades of fasteners and their applications.
2. Selecting and measuring appropriate gasket materials.
3. Identifying the types and uses of various torquing fasteners.
4. Describing factors that affect gasket crunch including: friction, torque, sequences and lubrication.
5. Performing appropriate torque procedures.

Competency 4: The student will demonstrate an understanding of sealants by:

1. Identifying types and uses of various sealants used in a power plant.
2. Following industry standard procedures for the handling, storage, and disposal of sealants.
3. Selecting the appropriate sealant when given a specific application.

Competency 5: The student will demonstrate an understanding of o-rings and gaskets by:

1. Identifying types and sizes of o-rings and the appropriate uses of each.
2. Demonstrating the proper handling and storage disposal of o-rings.
3. Demonstrating the Installation of different types of o-rings.
4. Identifying types and sizes of gaskets and the appropriate uses of each.
5. Describing the types of defects that must be detected in o-rings and gaskets.
6. Demonstrating the correct replacement of o-rings and gaskets.
7. Performing addition of o-rings and gaskets to threaded bolting and connections.

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