

## Master Syllabus

### EGV 1251 - Introduction to Energy Management Principles

**Division:** Science, Mathematics and Engineering

**Department:** Engineering Technology Design

**Credit Hour Total:** 3.0

**Lecture Hrs:** 2.0 **Lab Hrs:** 2.0

**Date Revised:** January 2015

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#### Course Description:

The course introduces the principles of energy management and an effective energy management plan. This course provides an overview of energy consuming systems and operations of commercial and industrial buildings and systems and energy saving opportunities for them. Two classroom, two lab hours per week.

#### General Education Outcomes:

- ▣ Critical Thinking/Problem Solving Competency
- ▣ Information Literacy Competency

#### Course Outcomes:

##### Energy Management Plan

Describe an effective energy management plan and its components.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

70% or better on all exams

##### Heating and Cooling Systems

Describe the components of the HVAC systems and exhaust systems of commercial and industrial facilities and the energy saving opportunities.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

70% or better on all exams

##### Lighting Systems

Describe the components of the HVAC systems and exhaust systems of commercial and industrial facilities and the energy saving opportunities.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

70% or better on all exams

##### Process Systems

Describe process heating and process cooling systems and the energy saving opportunities.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

70% or better on all exams

##### Building Envelope

Describe the components and construction procedures of building envelopes and the energy saving opportunities.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

70% or better on all exams

#### Outline:

Components of An Effective Energy Management Plan

Heating and Cooling Systems

Control System Overview

Distribution and Process Equipment

Lighting and Electrical Distribution Systems

Overview of Building Envelope

Implementation Strategies