

## Master Syllabus

### EGV 2301 - Commercial & Industrial Assessment

**Division:** Science, Mathematics and Engineering

**Department:** Engineering Technology Design

**Credit Hour Total:** 3.0

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

**Date Revised:** October 2013

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#### Course Description:

This course covers methods of collecting data (utility, envelope, mechanical systems, and operational procedures) for both commercial and industrial facilities and analyzing the data with statistical procedures and simulation software to develop energy-saving management plans. Two classroom, two lab hours per week.

#### General Education Outcomes:

- Critical Thinking/Problem Solving
- Computer Literacy

#### Course Outcomes:

##### HVAC equipment and operation

Demonstrate understanding of HVAC equipment application and operation in commercial and industrial buildings.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 70% or better on exams

##### Energy simulation software

Demonstrate operation of energy simulation software.

**Assessment Method:** Performance appraisals

**Performance Criteria:** Receive at least 70% of available points.

##### Data loggers

Demonstrate operation of data collection equipment such as data loggers.

**Assessment Method:** Behavioral observations

**Performance Criteria:** Achieve at least "7" out of 10 points on a checklist.

##### Industrial processes and equipment

Demonstrate understanding of industrial processes and equipment.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 70% or better on exams

##### Utility data

Analyze energy use utility data.

**Assessment Method:** Performance appraisals

**Performance Criteria:** Receive at least 70% of available points.

#### Outline:

Analyzing energy use utility data  
Operation of energy simulation software  
Operation of data collection equipment such as data loggers  
Operation of HVAC equipment in commercial and industrial buildings and the data collection procedures  
Industrial processes and equipment such as heat exchangers  
Energy management plans and reports