

## Master Syllabus

### EGV 1101 - Alternate & Renewable Energy Sources

**Division:** Science, Mathematics and Engineering

**Department:** Engineering Technology Design

**Credit Hour Total:** 3.0

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

**Date Revised:** April 2013

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#### Course Description:

Overview of past, recent and current research to find viable alternative sources of energy. Examples include water, wind, solar, bio-mass, alternative liquid fuels and introduction to fuel cell technology. Study of applied technologies in the context of how to relieve complete dependence on petrochemical-based products. A case study approach to learning is used. Two classroom, two lab hours per week.

#### General Education Outcomes:

- ▣ Written Communication
- ▣ Critical Thinking/Problem Solving

#### Course Outcomes:

##### Internet and other searches

List various types of energy resources.

**Assessment Method:** Portfolios

**Performance Criteria:**

Receive at least 70% of available points

##### Economic and technological feasibility

Determine the economic and technological feasibility to implement one or more of these technologies into a new construction project.

**Assessment Method:** Portfolios

**Performance Criteria:**

Receive at least 70% of available points

##### Alternate energy vehicles and sources

Analyze the current trend of various auto-manufacturers to supply alternative fueled vehicles to the consumers as well as other energy sources of electrical power.

**Assessment Method:** Portfolios

**Performance Criteria:**

Receive at least 70% of available points

#### Outline:

Water power Wind power Alternative liquid fuels Solar energy Bio-mass fuels Fuel cells