

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

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