Sinclair Community College
444 E. Third St.
Dayton, OH 45402

Master Syllabus

EGV 2101 - Solar Photovoltaic Design & Installation

Division: Science, Mathematics and Engineering

Department: Engineering Technology Design

Credit Hour Total: 3.0 **Lecture Hrs:** 2.0 **Lab Hrs:** 2.0

Date Revised: June 2014

Course Description:

This course covers components of solar PV systems and components and the sizing of PV systems and components. Designed to prepare the student to take the NABCEP PV Entry Level Exam. Two classroom, two lab hours per week.

General Education Outcomes:

- Critical Thinking/Problem Solving Competency

Course Outcomes:

Solar PV modules
Describe the operation of solar PV modules.

Assessment Method: Locally developed exams
Performance Criteria: 70% or better on exams

PV system sizing
Size a photovoltaic system and all required components.

Assessment Method: Locally developed exams
Performance Criteria: 70% or better on exams

PV system performance analysis
Analyze system performance and describe maintenance and troubleshooting requirements.

Assessment Method: Locally developed exams
Performance Criteria: 70% or better on exams

Components
Identify and describe the components of both stand alone and grid connected photovoltaic systems.

Assessment Method: Locally developed exams
Performance Criteria: 70% or better on exams

Solar energy fundamentals
Identify and describe fundamentals of solar energy functions.

Assessment Method: Locally developed exams
Performance Criteria: 70% or better on exams

Outline:

PV System Sizing PrinciplesPerformance Analysis, Maintenance and TroubleshootingSystem ComponentsSolar Energy FundamentalsElectricity BasicsSafety BasicsPV System Electrical DesignPV System Mechanical DesignSolar PV Modules