**Week 1 Module 1 Basic solar introduction**

Element of competency:

 Understand the solar resource

Description:

Present the basic terms used in the solar industry

Instructional strategies:

-Discussion

-Forum Discussion

- Peer Discussion

- Presentations

- Lecture

- Videos

* Practice Sheets

Readings Assignments and due date:

Test 1 Questions Solar Basics

Due Week 2

Resources

Power point Solar Basics Day 1

**Week 2 Module 2 Introduction to PV Applications**

Element of competency:

 Identify common solar PV applications and their purpose

Description:

Present the most popular uses of solar PV applications

Instructional strategies:

-Discussion

-Forum Discussion

- Peer Discussion

- Presentations

- Lecture

- Videos

* Practice Sheets

Readings Assignments and due date:

Resources:

Power point Solar applications

**Week 3 Module 2 Introduction to PV Applications**

Element of competency:

 Identify common solar PV applications and their purpose

Description:

Present the most popular uses of solar PV applications

Instructional strategies:

-Discussion

-Forum Discussion

- Peer Discussion

- Presentations

- Lecture

- Videos

* Practice Sheets

Readings Assignments and due date:

Assignment 1 PV Applications

 Due Week 4

Resources:

Power point Solar applications

**Week 4 Module 2 Introduction to PV Applications**

Element of competency:

 Identify common solar PV applications and their purpose

Description:

Present the most popular uses of solar PV applications

Instructional strategies:

-Discussion

-Forum Discussion

- Peer Discussion

- Presentations

- Lecture

- Videos

* Practice Sheets

Readings Assignments and due date:

Test 2 Questions Applications

 Due Week 4

Resources:

Power point Solar applications

**Week 5 Module 3 Insolation**

Element of competency:

 Understand the solar resource

Perform basic site assessments

Description:

Present the solar resource

Instructional strategies:

-Discussion

-Forum Discussion

- Peer Discussion

- Presentations

- Lecture

- Videos

* Practice Sheets

Readings Assignments and due date:

Resources:

Power point

 Azimuth and Zenith

Module Insolation

**Week 6 Module 3 Insolation**

Element of competency:

 Understand the solar resource

Perform basic site assessments

Description:

Present the solar resource

Instructional strategies:

-Discussion

-Forum Discussion

- Peer Discussion

- Presentations

- Lecture

- Videos

* Practice Sheets

Readings Assignments and due date:

Test1 Questions Insolation

Lab 1 Insolation

Due Week 7

Resources:

Power point

 Azimuth and Zenith

Module Insolation

Sample Lab Report

**Week 7 Module 3 Insolation**

Element of competency:

 Understand the solar resource

Perform basic site assessments

Description:

Present the solar resource

Instructional strategies:

-Discussion

-Forum Discussion

- Peer Discussion

- Presentations

- Lecture

- Videos

* Practice Sheets

Readings Assignments and due date:

Test2 Questions Insolation

Lab 1A Day of Irradiance

Due Week 8

Resources:

Power point

 Azimuth and Zenith

Module Insolation

**Week 8 Module 3 Insolation**

Element of competency:

 Understand the solar resource

Perform basic site assessments

Description:

Present the solar resource

Instructional strategies:

-Discussion

-Forum Discussion

- Peer Discussion

- Presentations

- Lecture

- Videos

* Practice Sheets

Readings Assignments and due date:

Lab 2 RETScreen

Due Week 9

Resources:

Power point

 Azimuth and Zenith

Module Insolation

RETScreen program

**Week 9 Module 2 Insolation**

Element of competency:

 Understand the solar resource

Perform basic site assessments

Description:

Present the solar resource

Instructional strategies:

-Discussion

-Forum Discussion

- Peer Discussion

- Presentations

- Lecture

- Videos

* Practice Sheets

Readings Assignments and due date:

Test3 Questions Insolation

Lab 3 Solar Pathfinder

Due Week 10

Resources:

Power point

 Azimuth and Zenith

Module Insolation

RETScreen program

Pathfinder-manual

**Week 10 Module 4 PV Panels**

Element of competency:

 Interpret PV panel data sheet information.

Measure PV panel data sheet values.

Understand how the PV panel operates.

Perform basic site assessments

Description:

Present the operations of the PV panels

Instructional strategies:

-Discussion

-Forum Discussion

- Peer Discussion

- Presentations

- Lecture

- Videos

* Practice Sheets

Readings Assignments and due date:

Lab 4 PV Panel Characteristics

Test1 Questions PV Panels

Due Week 11

Resources:

Power point

 Module PV

**Week 11 Module 4 PV Panels**

Element of competency:

 Interpret PV panel data sheet information.

Measure PV panel data sheet values.

Understand how the PV panel operates.

Perform basic site assessments

Description:

Present the operations of the PV panels

Instructional strategies:

-Discussion

-Forum Discussion

- Peer Discussion

- Presentations

- Lecture

- Videos

* Practice Sheets

Readings Assignments and due date:

Lab 5 PV Panel Angle of Incidence

Test2 Questions PV Panels

Due Week 12

Resources:

Power point

 Module PV

**Week 12 Module 4 PV Panels**

Element of competency:

 Interpret PV panel data sheet information.

Measure PV panel data sheet values.

Understand how the PV panel operates.

Perform basic site assessments

Description:

Present the operations of the PV panels

Instructional strategies:

-Discussion

-Forum Discussion

- Peer Discussion

- Presentations

- Lecture

- Videos

* Practice Sheets

Readings Assignments and due date:

Lab 6 Shading and the By-pass diodes

Test3 Questions PV Panels

Due Week 12

Resources:

Power point

 Module PV