

# REENERGIZE-4: Planning for the Assessment of Student Learning of Sustainability & Green Design Content

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College/University: Coastal Bend College, Beeville Texas  
Course: DFTG 2312-Technical Illustration Semester: Summer 1-2015/Fall 2016  
Expected Number of Sections: one/semester Expected Number of Students: 10 -12+/-

*Using the suggested teaching activities presented at the end of each of the training lectures, identify two activities that most interest you. Fill in the form below to show a plan that integrates these activities into your classroom. In addition, develop five assessment questions that will allow you to measure your students learning.*

## **Injecting Training Materials into the Classroom**

Objectives of Activity:

### **Drawing Illustrations**

- To engage students in a technical illustration design layout of the assembly of both the solar panels and the wind turbines on the CBC site.
- To develop assembly drawings illustrating a step by step illustration demonstrating instructions on how to assemble the components.
- The drawings will either illustrate how to assemble the solar & wind turbines or they will document "As Built".

Description of Course Activity (i.e. Homework, Example, Quiz, Project, etc.):

### **Technical Illustration Drawing Project**

- Work with other students in the machine design class and develop assembly illustrations.
- Drawings of how to Assemble each of the solar (PV) panels & the wind turbine, illustrating and "Instructional Manual" of detailed illustration drawings on "How To Assemble" the systems.
- CAD drawings of a variety of related components.

#### Student Deliverables:

1. Students will interpret working drawings from machine design process & develop preliminary layout of CAD drawings of exploded isometric & assembly isometric.
2. Re-design & improve upon preliminary layouts.
3. Include specifications & written instructions on the drawings through the complete assembly process.
4. Develop a complete set of illustration/presentation CAD drawings. At the end of the project including
  - A. Exploded Isometric
  - B. Assembled Isometric
  - C. Instruction Specifications
  - D. Sub-assemblies if Required

#### Implementation Plan:

We will implement this project in Summer I 2015 or Fall 2015, as we are offering DFTG 2312 Technical Illustration in this class, providing the Summer class makes, or in next course offering in Fall 2015.

#### Student Assessment Questions:

1. Why is it important to perform assembly drawings of a product? To ensure proper assembly of the product and to serve as a guide for quicker installation.
2. Do assembly drawings need to be as detailed as working drawings? They should have detailed parts shown accurately but not as detailed as the working drawings.
3. Are drawings for Illustration/Presentation necessary to have instructions/specifications for assembly? YES
4. What other purpose might illustration drawings be used for? Presentation of the design and communication of ideas.

5. When designing any new project not only is it beneficial to know about the details, but a designer must also know: Materials needed, measurements for size, and various other factors.