

# EGY 105 - SUSTAINABLE BUILDING DESIGN

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- Critique current building methods for energy efficiency and environmental impact.

## Learning How to Learn:

- Evaluate how modern methods lend to more energy efficient building.

## Course Description

This course provides a great introduction to sustainable building practices. Through structured classroom activities, the student will learn about the structure of matter and the material world, whole system thinking, site and natural energy mapping, water resources, building orientation, materials and resources, indoor air quality, innovation and design. This course is required to achieve a Level II Certificate in Renewable Energy Technology. Group 2 course.

## Credit Hours

3

## Contact Hours

3

## Lecture Hours

3

## Recommended Prerequisites or Skills Competencies

Placement in MTH 23 or co-enrollment in the recommended developmental Math course, placement into ENG 11/111 or co-enrollment in the recommended English course.

## Course Learning Outcomes

### Knowledge:

- Define structure of matter.
- Explain whole system thinking.
- Describe mapping.
- Identify water resources.
- Interpret air quality.

### Application:

- Refine their thinking about the entire environmental system.
- Map for both the site and natural energy found in the area.
- Research the different materials and resources used in home building.
- Create innovative designs that make use of local energy resources.

### Integration:

- Assess air quality of a home.
- Measure water resources and natural energy.
- Compare and contrast the difference in building a 'regular' home versus a LEED certified home.
- Determine value-added for homes built meeting LEED specifications.

### Human Dimension:

- Describe the process of completing a LEED spec home.
- Show the impact upon society for developing energy efficient and environmentally friendly homes.

### Caring - Civic Learning:

- Evaluate the environmental impact and energy efficiency of construction.