Course Description

Introduces students to ethics, ideas, technologies, methods and current practices in designing sustainable environments. Lecture 3 hours per week.

General Course Purpose

To introduce Architectural Technology students to the role that architects must play in designing ecologically sustainable environments to address issues of climate change and the use of energy producing resources.

Course Prerequisites/Co-requisites

Prerequisites are ARC 123 and ARC 133.

Course Objectives

Upon completing the course, the student will be able to:

- Discuss the ethics of designing sustainable environments and the forces mitigating against such design.
- Identify renewable and ecologically sustainable energy producing resources.
- Describe factors affecting energy use in buildings.
- Analyze passive design strategies.
- Describe the USGBC and LEED rating systems and their design implications.
- Identify recyclable building products.
- Identify building products which are produced, delivered and installed while producing the smallest carbon footprint.
- Cite strategies for sustainable site planning
- Cite current examples of practical applications of the above.

Major Topics to be Included

a. The ethics of sustainable design
b. Energy producing resources
c. Energy use in buildings
d. Passive design strategies
e. USGBC and LEED rating systems
f. Recyclable building products
g. The carbon footprint
h. Sustainable site planning
i. Current practice in designing sustainable architecture