

# Northland Community and Technical College

## ARCH 1128: Environmental Design

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 1

Lab Hours/Week: 2

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course will help students understand the importance of environmental issues and how to use them in their design process. This will allow them to put to use natural forces to help mold a building that is sensitive to the environment. Prerequisites: None

### B. COURSE EFFECTIVE DATES: 04/06/2010 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

### D. LEARNING OUTCOMES (General)

1. Identify solar heating systems used in a variety of architectural designs and projects.
2. Identify super-insulated construction types used in variety of architectural designs and projects.
3. Prepare an effective site analysis for variety of architectural designs and projects.
4. Prepare heat loss calculations for a variety of architectural designs and projects.
5. Examine Leadership in Energy & Environmental Design (LEED) certification requirements.
6. Prepare a LEED audit of a new or existing building.
7. Investigate new LEED /GREEN/Energy products used in construction and building maintenance.
8. Research various types of energy efficient construction types.
9. Apply various types of energy efficient systems in building design.
10. Understand the effects of energy efficient construction on the environment.
11. Identify basic elements of environmental building design.
12. (ILO: 3) Apply concepts of ethical environmental care to a variety of architectural designs and projects.

### E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

## **F. LEARNER OUTCOMES ASSESSMENT**

Methods:

1. Exam, objective
2. Quiz, written
3. Class participation
4. Individual projects
5. In class exercises

## **G. SPECIAL INFORMATION**

None noted