

ACE Mentor Program Course Syllabus for Spring 2009

Architect Leader:

Charles Hendricks, AIA, CSI, CDT, LEED AP

The Gaines Group, plc

434.979.5245

cbhendricks@thegainesgroup.com

Design Projects

Project Options

Project # 1: Portable recycling Center or water filtration center

This project involves the design of a 10' x 10' portable demonstration center for either the collection of recyclables or the filtration of rainwater. The project will act as a teaching tool for the Albemarle community to illustrate eco-sensitive steps we can all take to preserve our available resources for future generations. The recycling center will include capacity to illustrate all the possible materials that can be recycled effectively, show where "away" is located (as in throw it away), show cost advantages to recycling, and actively function as a recycling center that can be transported to Albemarle County events (AHS Football games, UVA soccer games, JPJ events). The water filtration center will include the capacity to illustrate the ability to take rainwater and reuse it in a project: from irrigation, to non-potable, to potable water. The project should include a teaching element that shows cost advantages and preservation of limited resources. The center should illustrate water use and consumption criteria for fixtures commonly found in buildings and landscapes.

Project #2: Energy Efficient Healthy Residence for a family of four

This project involves the design of an energy efficient high performance residence for a family of four people. The project should act as a teaching tool for the Albemarle County community to illustrate how to achieve healthy well designed residential construction. Similar to the CATEC Hinge House, this project should meet the LEED for Homes design standards for a LEED Gold project. The project should include energy efficient design, passive solar design, meet American Lung Health House interior standards, include a rainwater collection system, meet Universal Design standards, have a recycling center, compost center, and on site food production facility. The project site is located in ...?

Project #2: Portable Teaching Studio

This project involves the design of an energy efficient high performance mobile teaching studio. This project should act as an example of a better way to build additional teaching space to Albemarle County Schools. The project should examine cost vs payback to using a high performance design solution for additional instruction space. The mobile studio should be acoustically designed to accommodate lecture and lab functions. The project should include energy efficient design, passive solar design, meet American Lung Health House interior standards, include a rainwater collection system, meet ADA requirements, and have a recycling center. This project should meet LEED for Schools Gold standards. The project site is located at Albemarle High School.

Project #3: Food Co-Op

This project involves the design of a sustainable food co-operative market. The project should act as a stimulus for the local neighborhood and economy in which it is sited. It should serve as a community gathering place, uniting urban areas with surrounding agricultural areas. Similar to the Charlottesville City market and the Charlottesville Downtown mall, the food co-operative must include individual vendors and retail spaces, incorporating environmental and sustainable practices. The program

integrates both permanent indoor and seasonal outdoor retail and community spaces. This project is well suited to the exploration of the principles of integrated design, sustainability, and innovation, and the resulting impacts on human health and well being. The project should include an indoor market to accommodate 10 vendors, a bookstore, a café, a seating area for dining for a minimum of 25 people and an outdoor market for seasonal products. The project site is located in Downtown Charlottesville.