

Sessional Instructor: Robert Drew
Course Manager: Tang Lee
Winter 2004

INTRODUCTION

During the 21st century, human society faces the daunting yet inspiring task of forging a new relationship with the natural world. This new relationship is captured by the term "sustainability." Sustainability implies meeting current human needs while preserving the environment and natural resources needed by future generations. Any project, development and activities must adhere to this concept if we are to minimise our impact on the planet, its resources and health of its inhabitants.

This design studio explores the issues of sustainability as a rigorous inquiry process. Recognising that the richness, comprehensiveness of a creative endeavour can only come about through collaboration, this studio will integrate individual project with whole class input. The success of the project is therefore dependant on true class participation.

Students will choose an individual path of inquiry, developing a hypothesis, a method of inquiry, and developing an answer or resolution, all in consultation with fellow classmates.

OBJECTIVES

- To explore the concept of sustainable design and development.
- To develop strategies which articulate the synthetic role of a built product or environment within a physical, cultural and environmental context.
- To develop skills to integrate ideas about space, form and structure with dynamic environmental forces.
- To learn how technology can be applied to support the process of design and the realisation of effective environmental strategies.
- To develop advanced skills in managing and soliciting group processes.
- Reform design studio from **ego** to **eco** (from the sovereignty of the individual designer to comprehensive environmental understanding).

APPROACH

This is an interactive class that present knowledge, concepts and ideas in which students are stimulated, can actively respond, and get results in a continuing feedback cycle. Design is a shared endeavour requiring discourse, debate, and consensus at each stage. Design thinking is taught as being hypothesis-building as well as problem-solving. Design has consequences beyond the object and must be thought of as both physical consequence envisioning and spatial envisioning. Envisioning biological, ecological, economic and human and social consequences enable better ways of conceptualizing, drawing, modeling, and diagramming.

Each student will pursue his/her own area of inquiry that may be theoretical, a design competition, a project or an event. That student shares the progress of the inquiry to the class throughout the course. Fellow classmates will participate in each other's inquiry as member of the team, to learn and to contribute. Thus most studio classes are team-working session for the purpose of helping each other.

The rigour of the inquiry demonstrates the student's competencies and ability to apply sustainable principles. It also demonstrates his/her ability for leadership, management of the project, and soliciting valued input in the process. A proportion of the student's grade is share by all. The final grade is based equally on the student's individual inquiry, and contributions to the other projects. Thus there is accountability for the success of the other projects.

COURSE TEXT

Barnett, Diana Lopez and William D. Browning (1995). **A Primer on Sustainable Building**. Rocky Mountain Institute. Snowmass, Colorado. (\$30)

Van der Ryn, Sim and Stuart Cowen. **Ecological Design**. Washington: Island Press, 1996.

AIA (1996). **Environmental Resource Guide**. New York: John Wiley. Art NA2452.35 E65 1996.

Vale, B., and Vale, R. **Green Architecture: Design for an energy conscious future**. A Bulfinch Press Book, Little, Brown and Company, Toronto. (\$60) – or –

Lovins, Amory, **Natural Capital**, Rocky Mountain Institute, Snowmass, Colorado.
<http://www.rmi.org/>

Marinelli, J., and Bierman-Lytle, P. **Your Natural Home**. Little Brown and Co. (\$40)

Rousseau, D., Wasley, J., **Healthy by design**. Hartley & Marks Publishers, Vancouver.
Godish, Thad, **Sick Buildings**. (Lewis Publishers.) CRC Press. (\$100.00)

Orr, David W., Ecological Literacy Education and the Transition to a Post-modern World.

Orr, David W., Earth in Mind on Education, Environment and the Human Prospect

Zeihner, Laura C., The Ecology of Architecture

Brand, Stewart, How Buildings Learn.

Publications from Canada Mortgage and Housing Corporation (CMHC).

<http://www.2nature.org/programs/starfish/courses.nsf>

EVALUATION

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| ▪ Studio project 1 | 50% |
| ▪ Studio project 2 | 50% |
| Total | 100% |