## Ecological Cities

**Instructor: Kirstin Miller – kirstin@ecocitybuilders.org**

**Wednesdays, October 20 – December 1. 6:30pm – 9:30pm, UCB Extension, 95 Third St. SF, Room 209 $425 (EDP 018515) X400.7 (1 semester unit in Architecture)**

This course emphasizes the organizing principles of ecologically healthy cities, taking into account land uses, eco-zoning and sustainable development strategies, restoration of nature, watersheds and agriculture in the city, and integration of natural design, inside and outside. As a foundation and basis for sustainable living and life-styles, students will focus on whole systems planning for the low-energy eco-city model and the phased transition away from the current high-energy auto-city through an ecocity zoning-mapping project. Together, we will explore a cooperative framework that can successfully address larger systems of organization and services in a post carbon era. In addition to weekly lectures and class discussions, students will participate in a working group of their choice, sharing information and proposed outcomes in short summary sessions. The working groups will allow students to brainstorm new ideas and develop strategies according to his or her particular key interests, knowledge and abilities that fit with an overall strategy for reshaping the city for sustainability and long-term health of nature and civilization.

### Learning Objectives

The class will familiarize students with strategies for creating a sustainable built environment for people and nature through the reshaping of the built human infrastructure, using principals and methods grounded in ecology and whole-systems thinking. Basic ecocity theory will be presented, as well as an overview of the city in evolution, the city today, and a step-by-step method for building the low-energy, sustainable city of tomorrow. Slide lectures, selected text and readings, in-depth discussions, a field trip, mapping projects and collaborative working groups will allow students to acquire a useful knowledge base of key issues and concepts. They will able to apply their skills to real time case studies, working within the context of their main interests.

### Instructional Methods

Each three-hour class will be structured around a combination of several of the following: slide lectures, class discussions, field trip, guest speakers, ecocity mapping exercises, student working groups and summary sessions. Students will be asked to complete independent reading assignments, and to research their own communities as part of the mapping process. They will be asked to report back to the group and present their findings and final projects.

### Reading Requirements

Main text:

*Ecocities, Building Cities in Balance with Na*ture by Richard Register (2nd edition, New Society Publishers, 2006).

Additional recommended reading:

- *Sustainability and Cities: Overcoming Automobile Dependence.* Author: Peter Newman and Jeffrey Kenworthy. Publisher: Island Press Publication Year: 1999. ISBN: 1559636602.
- *Ecopolis, Architecture and Cities for a Changing Climate*. With a Foreword by Ken Yeang. Series: Future City, Vol. 1. Downton, Paul F. Jointly published with CSIRO Publishing, Australia. 2009, XX, 608 p. 45 illus. in color., Hardcover ISBN: 978-1-4020-8495-9.
- *Sustainable Infrastructure: The Guide to Green Engineering and Design*. Author: S. Bry Sarte. ISBN: 978-0-470-45361-2. Hardcover 384 pages. 2010.
- *Invisible Cities*. Author: Italo Calvino. (Hardcover & Paperback). 165 pp (first English edition). ISBN 0-15-145290-3.
- *Making Mondragon*: The Growth and dynamics of the Worker Cooperative Complex. Author: William Foote Whyte and Kathleen King Whyte. Ithaca, NY: NYSSILR Press, 1988 315 pp.

**Credit Requirement**

20% class participation in class discussion

20% class assignments and study questions

30% class presentations of mapping projects

30% working group project presentations

**Course Outline for Ecological Cities**

1st Class:

I. The City As Organism and Ecosystem: The Whole Systems Ecocity Approach

II. Evolution of Cities: From Old Synthesis Architecture to European Towns and Villages, to Modern Cities, Sprawl and Big Ego Architects and New Urbanism

III. Overview of some of the work and programs of Ecocity Builders

2nd Class

I. Principles of Ecocity Building: Density, Diversity, Access by Proximity, Tools for Removing Sprawl, Integral Neighborhoods, Centers Oriented Design, Urban Fractals, and more. Guest: Richard Register, President, Ecocity Builders

II. Working Groups Background Presentations

III. Explanation of the mapping project, initial analysis and project outline

3rd Class **FIELD TRIP – WEST OAKLAND**

I. With *Village Bottoms Neighborhood Association*

II. Learn about sustainable urban planning issues in West Oakland and visit projects and sites in development by the neighborhood in partnership with Ecocity Builders, to develop a cultural district in the Village Bottoms. Meet with stakeholders, learn about how sustainability is being built into the community with exciting possibilities for ecocity design.

4th Class

I. Lecture and discussion: Ecocity planning and policies in the Global Context – highlighting China and Nepal, other locations Ecocity Builders' works and consults

II. Short Film: *Urban Solutions from Curitiba Brazil* (2007)

III. Working groups meetings, mapping lab

5th Class

I. Green Infrastructure – the latest in green design with an emphasis on solutions for developing countries

III. Working group and mapping presentations.

6th Class

I. Project Presentations, individual mapping and group presentations

II. Party

## Working Groups/Mapping Project

**Choice #1. West Oakland: Village Bottoms Cultural District**. Students in this working group will strengthen and develop their ecological design skills by participating in a major community urban planning project currently unfolding in the Village Bottoms neighborhood in West Oakland. They will gain first hand experience working with key stakeholders and involved members of the community. They will learn to understand and respond to a wide variety of perspectives, community values, and urban planning challenges based on a complex mix of political, social, environmental and economic conditions. Students will develop group schematic designs and project outlines for the continued evolution of the cultural district: projects to get involved with include Village Bottoms Farm and Black Dot Café and Cultural Center, among others. Students will learn how to integrate concepts of ecological design and whole systems planning into their projects, and will present their ideas and designs. They may also be working on hands on projects currently underway at Village Bottoms Farm, including plans for shipping container housing and an urban aquaponics enterprise.

**Choice #2. Kathmandu Living City Project** Ecocity Builders is partnering with organizations in Kathmandu Nepal to envision Kathmandu as a city meeting all of the Imperatives of the Living Building Challenge (Version 2.0). Students in this working group will join in and help the team establish an understanding of the ancient urban systems of Kathmandu and nearby towns; research current conditions of urban Kathmandu; research projects already underway, and propose ideas to further support returning as much of the urban environment to more ideal conditions for sustainability with as much restoration of the ancient systems as possible, coupled with current interventions and approaches for repairing and restoring; propose sustainable development interventions to deal with the rapid growth and unplanned settlements, regional planning for healthy development and restoration of decaying ecosystems, like the watershed, and finally; integrate ideas about improving the health and welfare of the people living in Kathmandu with ecocity urban solutions, "green" job creation and possible proposals for community banking and investment in distributed mini mills and collectives that increase jobs available and replace some more polluting factories.

## Ecocity Mapping Project

Each student will develop an ecocity base map for the city they live in. This can be a paper map or a GIS based map. The map will be an evolving tool useful for evaluating small and large development proposals, transit planning, renewable energy efficiency planning, open space improvements, community garden expansions, creek/watershed restoration, neighborhood commercial centers and disaster planning.