

## URBD 5702-Environmental and Urban Economics

2017-2018 2<sup>nd</sup> Term

Thursday 9:30am-12:15pm TBC

Instructor: Prof. HE, Ying Sylvia

Email: [sylviahe@cuhk.edu.hk](mailto:sylviahe@cuhk.edu.hk)

Office: Room 229, 2/F, Wong Foo Yuan Building

Phone: 3943-6646

### Course Objectives

1. To introduce the application of microeconomics in environmental and urban studies
2. To provide analytical tools for case study, project review, policy analysis, and city management
3. To equip urban design students with a way of economic thinking in urban planning and policy making and to prepare them to be able to analyze environment and urban problems based on microeconomic reasoning

### Expected Learning Outcomes

Students are expected to be able to understand several major microeconomic topics, including supply and demand, equilibrium, shortage and surplus, cost/benefit analysis, taxes and subsidies, profit maximization, markets and government, externalities, and public goods. The concepts and analysis of these topics will enable students to study and analyze current environmental and urban issues. At the end of this course, students are expected to have a solid understanding of urban economics theory and analytical tools for environmental planning.

### Evaluation and Grading Criteria

Individual paper + presentation	20%	written report due: <b>Week 7</b>
Group project + presentation	35%	written report due: <b>Week 15</b>
Quiz	30%	<b>Week 12</b>
Participation + Discussion	15%	

- **Individual paper + presentation** (Individual work)

Students are asked to select a project (either designed by you or by others) and to identify any economic motivations of the project. Describe the project background, geographical and cultural context, describe whether the project has made any positive or negative impacts to the neighborhood and the city, and assess whether the project is successful or not *from economic, environmental, and social perspective*. The review should be between 1,500-2,000 words (including references, excluding tables and figures). Each student will have 10 minutes to present.

- **Group project + presentation** (Group work)

The topic of this year's group project is "Innovative Urban Design for Aging Population in Hong Kong". Many world cities have an increasing proportion of elderly population. Some literature in urban planning argues that out-of-home mobility has positive impact on the well-being of the elderly. However, the built environment in Hong Kong may not be the most desirable one for older people.

In this project, each group needs to conduct literature related to the topic and the current situation in Hong Kong, and then propose some innovative designs in a selected neighborhood in Hong Kong using urban design thinking and visualization skills. The goal of the new design is to create a more encouraging environment for the elderly people to go out of their homes and participate in various activities in their neighborhood/community (e.g., strolling, shopping, going to parks, meeting with friends and families, etc.) so as to improve their well-being. Based on your research findings, please include a section in your report focusing on policy implications, where you propose changes in government policies related to urban design for the aging population. Please use the following keywords to guide your research: urban design, aging population, neighborhood, built environment, travel mobility, social interaction, community, and well-being.

Each group will have 15 minutes to present. The report should be between 2,500-3,500 words (including references, excluding tables and figures).

- **Quiz**

The quiz consists of multiple choice questions and calculation questions. The quiz is open book and open notes. A calculator is needed.

## **Textbooks**

- Required Textbooks  
*Urban Economics (7th Edition)* (2009) (or newer edition)  
Author: Arthur O'Sullivan  
Publisher: McGraw-Hill, ISBN: 978-0-07-337578-6

- Recommended Textbooks

*Environmental Economics & Management: Theory, Policy, and Applications (4th Edition)* (2007)

Authors: Scott J. Callan, Janet M. Thomas

Publisher: Thomson South-Western

*Principles of Microeconomics (7th Edition)* (2014)

Author: Gregory Mankiw

Publisher: Cengage Learning, ISBN-13: 978-1305081673

## Course Outline

<p><b>Week 1</b> Jan 11<sup>th</sup></p>	<p><b>Course Overview</b> Reading: O'Sullivan Ch 1-2 Why do cities exist, conditions for a city to development, major study areas in urban economics  <b>Tutorial:</b> group discussion – what is a good urban design project? Economic considerations in urban design (community design, neighborhood design)</p>
<p><b>Week 2</b> Jan 18<sup>th</sup></p>	<p><b>Tools of Microeconomics</b> Reading: Mankiw Ch 4-5, 10; O'Sullivan Appendix</p>
<p><b>Week 3</b> Jan 25<sup>th</sup></p>	<p><b>Why Do Firms Cluster?</b> Reading: O'Sullivan Ch 3, The benefits and costs of clustering, knowledge spillovers, localization economies, urbanization economies  <b>Tutorial:</b> Potential topics for individual paper</p>
<p><b>Week 4</b> Feb 1<sup>st</sup></p>	<p><b>City Size and Urban Growth</b> Reading: O'Sullivan Ch 4-5 Utility and city size, a system of cities, specialized and diverse cities, central place theory; economic growth, equilibrium employment  <b>Tutorial:</b> Video and discussion – Prop 13</p>
<p><b>Week 5</b> Feb 8<sup>th</sup></p>	<p><b>Urban Land Rent</b> Reading: O'Sullivan Ch 6 Land rent, bid-rent curves for different economic sectors, housing prices, land use patterns  <b>Tutorial:</b> Presentation of individual paper (I)</p>
<p><b>Week 6</b> Feb 15<sup>th</sup></p>	<p><b>No class (Chinese New Year holiday)</b></p>

<b>Week 7</b> Feb 22 <sup>nd</sup>	<b>Land Use Patterns</b> Reading: O'Sullivan Ch 7 Spatial distribution of employment and population, monocentric city, urban sprawl  <b>Tutorial:</b> Presentation of individual paper (II)
<b>Week 8</b> Mar 1 <sup>st</sup>	<b>Neighborhood Choice</b> Reading: O'Sullivan Ch 8 Diversity versus segregation, sorting, neighborhood externalities, neighborhood amenities and choice, schools, crime  <b>Tutorial:</b> Presentation of individual paper (III)
<b>Week 9</b> Mar 8 <sup>th</sup>	<b>Zoning</b> Reading: O'Sullivan Ch 9 Land-use zoning, growth control, growth boundaries  <b>Tutorial:</b> Presentation of individual paper (IV)
<b>Week 10</b> Mar 15 <sup>th</sup>	<b>Housing</b> Reading: O'Sullivan Ch 14 Hedonics, public housing, vouchers, community development and urban renewal, housing policy, rent control  <b>Tutorial:</b> Presentation of individual paper (V)
<b>Week 11</b> Mar 22 <sup>nd</sup>	<b>Urban Transportation</b> Reading: O'Sullivan Ch 10-11 Transportation externalities, congestion and congestion tax, subsidies, autos and air pollution; mass transit, travel mode choice, transit and land-use patterns  <b>Tutorial:</b> Progress report of group project
<b>Week 12</b> Mar 29 <sup>th</sup>	<b>Modeling Solutions to Environmental Problems</b> Reading: Callan and Thomas Ch 4-5 Conventional Solutions to Environmental Problems; Economic Solutions to Environmental Problems  <b>Tutorial:</b> Progress report of group project
<b>Week 13</b> Apr 5 <sup>th</sup>	<b>No class (Ching Ming Festival)</b>
<b>Week 14</b> Apr 12 <sup>th</sup>	<b>Quiz</b>
<b>Week 15</b> Apr 19 <sup>th</sup>	<b>Term Paper Presentation</b>

## ACADEMIC HONESTY AND PLAGIARISM

Attention is drawn to University policy and regulations on honesty in academic work, and to the disciplinary guidelines and procedures applicable to breaches of such policy and regulations. Details may be found at <http://www.cuhk.edu.hk/policy/academichonesty/>.

With each assignment, students will be required to submit a signed declaration that they are aware of these policies, regulations, guidelines and procedures. For group projects, all students of the same group should be asked to sign on the declaration.

Students are required to submit a softcopy of the assignment to the VeriGuide system at: <https://veriguide2.cse.cuhk.edu.hk/cuhk/>.

After submission, student should receive a receipt and an academic honesty declaration statement via an e-mail from VeriGuide. Please print the receipt and the declaration statement (below) and submit them to the lecturer together with a hardcopy of the assignment.

I declare that the assignment here submitted is original except for source material explicitly acknowledged. I also acknowledge that I am aware of University policy and regulations on honesty in academic work, and of the disciplinary guidelines and procedures applicable to breaches of such policy and regulations, as contained in the website <http://www.cuhk.edu.hk/policy/academichonesty/>

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name

\_\_\_\_\_  
Student ID

\_\_\_\_\_  
Course code

\_\_\_\_\_  
Course Title