Department of Geography, The University of Hong Kong

GEOG3210 Trees for Green and Liveable Cities (6 credits)

Course Teacher:	***Professor C.Y. Jim***
Level:	***300***
Curriculum Option:	***China (elective), Environment (core), Tourism (elective) Urban (core)***
Prerequisite:	***Nil***
Timetable Arrangement:	***Biennial odd, semester 1***
Lecture Time:	***Thursday 10:30 a.m. to 12:20 p.m.***
Lecture Venue:	***CPD-LG63***
Course TA:	***(to be announced)***

Objectives

The course assesses the growth and distribution of trees in the city landscape, emphasizing the interactions between trees and soil and atmospheric environment, institutional constraints to tree planting and care, and measures to improve the quantity and quality of urban greenery.

Course Synopsis

This course introduces students to trees as the most dominant element of the natural-green compartment of an urban ecosystem. As prominent landscape features and ecological contributors to biodiversities in human settlements, trees are surveyed with respect to composition and structure, environmental conditions for their existence, multiple benefits and functions that they can bring to city inhabitants, and general pattern of green spaces in cities. Various stress factors dampening tree vigour in the trying urban environment in the above- and below-ground realms, and the resulting arboricultural problems, are considered. The practical management of trees in the urban landscape is elaborated with reference to species composition and selection to match different site conditions, tree planting techniques and subsequent care, tree preservation and transplanting, and the assessment and valuation of urban trees. By adopting a non-technical approach, students with arts, social sciences or science background with an interest in the natural aspects of cities are targeted.

Lecture Topics

- Tree structure and function
- Subaerial environment for tree growth
- Soil and rooting constraints to tree growth
- Arboricultural disorders
- Multiple benefits of urban trees
- Tree planting and species selection
- Tree transplanting
- Tree management in urban Hong Kong

Fieldwork

One *field trip* to learn field assessment of trees, followed by students' own small-scale *tree survey* to apply the acquired knowledge to real-world trees in a site to be chosen by students.

Assessment

Examination (two hours) 60%; coursework 40% (consists of a report on the field trip and tree survey).

Learning Outcomes

Knowledge:

- Multiple benefits and ecosystem functions of urban greenery
- Limitations and problems of tree growth in the urban environment
- Methods and approaches to improve tree growth and protection in cities

Skills:

- Multidisciplinary outlook and integration of knowledge from a wide range of cognate fields
- Field assessment, data analysis and interpretation of urban trees
- Writing an independent and critical report on data collected in the field on urban-tree growth problems

Recommended Reading List

1. Bradshaw, A., Hunt, B. and Walmsley, T. (1995) *Trees in Urban Landscape*. Spon, London.
2. Grey, G.W. (1996) *The Urban Forest.* Wiley, New York, NY.
3. Harris, R.W., Clark, J.R. and Matheny, N.P. (2004) *Arboriculture: Integrated Management of Landscape Trees, Shrubs, and Vines*, 4th edition. Prentice Hall, Upper Saddle River, NJ.
4. Miller, R.W. (1997) *Urban Forestry: Planning and Managing Urban Greenspaces*, second edition. Prentice Hall, Englewood Cliffs, NJ.

[CY Jim/GEOG3210 Course Outline/16 August 2013]