ECON3021
Urban Economics
Lecture 1: Course Overview, What is a city and a little history

Lars Nesheim

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ECON3021
Urban Economics
(0.5 units, Winter 2008)

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Time and Location: Wed. 9:00-10:00, Jevons Lecture Theatre (Drayton House)
Thurs. 3:00 - 4:00, Jevons Lecture Theatre (Drayton House)
Office Hours: Wed. 1:00 - 3:00 or by appointment

Aims: This course has two primary aims. The first aim is to show students the most important ways in which economic theory and applied methods have been used to analyse urban economies. The second aim is to enable students to analyse key issues in the markets for land, housing, and transportation using economic tools.

Objectives: After completing the course students should:

- have a clear understanding of the main topics of the course including the theory of location choice, spatial equilibrium and land rents, local externalities, the theory of housing investment, and congestion and transportation economics.
- be able to use standard models from urban economics to analyse questions related to location choice, housing markets, transportation, land use, and local public finance.

Course Website:
http://www.homepages.ucl.ac.uk/~uctpln0/econ3021/econ3021.htm

Primary Texts

- Nesheim, L. ECON3021 Lecture Notes
- Nesheim, L. ECON3021 Homework Solutions

Supplementary reading

- E. Mills and B. Hamilton, *Urban Economics*, 1994.
  - On reserve in library, 3 copies.

Overview: This third-year Economics course draws on economic theory and applied methods to analyse the factors underlying urban economies and the markets for land, housing, and transportation. A key feature of the analysis will be the importance of spatial interactions in urban economies. A number of key topics in urban economics will be considered: the theory of location choice and land rents; agglomeration, congestion and other local spillovers; housing investment and the evolution of the housing stock; land use and land use regulation; and local public finance.

Coursework: There will be 4 written assignments. All must be in the class pigeon hole by noon on the Monday of the week of the tutorial session.

- First tutorial class to be held the week of January 21.
- First assignment to be handed out January 16.
- First assignment is due January 21.

Exam: The final examination will be a 2 hour examination. The first section will include 4 questions, 3 of which must be answered. The second section will include 3 questions, 2 of which must be answered. The two sections of the exam will carry equal weight in the final mark.

- Previous exams are available on the website.

Course Outline

1. Introduction – Lecture 1
   (a) What is a city?
   (b) What is urban economics?
   (c) A little history.

2. Location choice, spatial equilibrium in a simple city, and extensions – Lectures 2-6
   (a) Residential and business location choice.
   (b) Spatial equilibrium and land rent.
   (c) Spatial equilibrium and city size.

3. Transportation – Lectures 7-10
   (a) Congestion and peak-load pricing.
   (b) Transportation infrastructure investment.
   (c) Consumer choice of mode of transportation.

4. Housing markets – Lectures 11-15
   (a) Consumer and landlord decision problems.
   (b) Tenure choice, housing investment, and credit constraints.
   (c) Evolution of the housing stock.
   (d) Rent control.

5. Urban public economics – Lectures 16-20
   (a) Property taxes.
   (b) Land use and land use regulations.
   (c) Public facility location choice.
   (d) Pollution, crime and other externalities.
   (e) Local public services and public goods.

Notes on requirements

- Mathematical level: basic algebra and calculus.
  - Solve utility maximisation subject to a budget constraint.
  - Compute simple integrals.
- Required readings from lectures, homework, and possibly some supplementary readings to be handed out.

History

- Broad changes in cities over time.

  1. First cities around 3000 BC
     (a) Technological innovations in agriculture and defense .
     (b) Why gather together? New economies of scale.
        – Scale economies in agriculture
        – Agglomeration, specialization, and trade
        – Technical feasibility of substituting capital (e.g. grain, tools, irrigation infrastructure, stone, pottery, knowledge) for land.
     (c) Why limited city size?
        – Limits to IRS.
        – Pollution, poor sanitation, congestion.
        – Limits to input substitution: some land required.
        – Intra-city transport costs high: must be able to walk or use cart.
     (d) These cities had small centers with market, storage facility, walk or take a cart across.
     (e) Politics and religion controlled by chief, priests, kings, etc.
     (f) Mesopotamia Valley (in what is now Iraq).
        – Technical breakthroughs: Domesticated grain, irrigation, plow.
        – Cities included Eiridu, Ur, Lagash, and Kish. Ur had 25,000 people in 150 acres.
        – Babylon: In 2000 BC, had 50,000 people.
     (g) Nile River valley: Memphis, Helipolis, Thebes.
     (h) Asia
        i. China: Yangtse and Yellow River valleys.
        ii. India: Indus River valley.
     (i) America: Southern Mexico (Olmec's).
  2. Cities grew and adapted.
     (a) Innovations in production, transportation.
     (b) Greek cities: 500 BC: hundreds of cities, Athens 150,000,Sparta 40,000.
     (c) Controlled by citizens.
     (d) Trade more varied, household crafts and processed food (olive products) for food and raw materials.
     (e) Rome, by 200 AD, 1 million people.