# URBAN ECONOMICS: ECONOMICS OF CITIES (ECON 4242)

Department of Economics, University of Colorado Spring 2019

Classtime: M, W, F: 12:00 - 12:50 pm Room: ECON 119 Professor: Charles de Bartolome Office: ECON 203

Office hours: Mon 1:50 - 2:50 pm; Tu 10:15-11:15 am; e-mail: debartol@colorado.edu

Fri 1:50 - 2:50 pm.

Textbook: Arthur O'Sullivan: Urban Economics (9th Edition). McGraw-Hill Irwin.

Clickers Each student must buy a i>clicker. If you do not already own one, an i>clicker may

be purchased at the University of Colorado bookstore. Clickers will be used to give

class problems which will be scored.

Clickers should be registered at: <u>myCUinfo.colorado.edu</u>. Register using your Identity Login not your student ID.

# Course description:

The U.S. is an urban country, with 80% of the population living in urban areas. This course considers the economic forces which drive households and jobs to congregate in metropolitan areas and thereby create cities. It then considers the forces within the city which determine how the established cities "look" - how rents vary with location, the distribution of jobs and households within a city, urban sprawl, and the sorting of households between neighborhoods. Finally it considers some government policies relating to land use.

### *Pre-requisites:*

Intermediate Microeconomics, ECON 3070; Introduction to Statistics with Computer Applications, ECON 3818.

### Course Assignments and Canvas:

All course assignments, problem sets and some lecture notes are posted on the Canvas at: http://canvas.colorado.edu

Please note that four pages of each Adobe Acrobat file can be printed on a single sheet by clicking as: Print > Landscape > Multiple > Custom 2 by 2.

#### Attendance at class:

Woody Allen once remarked: "90% of success is just turning up". The best way to learn the material is to attend class. Reading the lecture notes posted on the web is not a good substitute for attendance. Attendance at class is expected and required.

## Administrative Drop:

Because attendance is important and is expected, I will drop from the class any student who neither attends two of the first three classes of the term nor gets special permission from me for his/her absence.

#### Problem Sets:

Problem sets with answers are listed under each topic on the syllabus. The problem sets are an integral part of the course. They are designed to help you use the material and a significant part of the exams will closely follow their format.

Although the answers to the problem sets are posted, I encourage you to make a real effort to solve the problem before you check the answer.

# *Grading*:

There will be two midterms, a final exam, in-class clicker questions and paper summaries. Your grade will be determined as:

25% First Midterm

30% Second Midterm

30% Final

8% In-class clicker questions.

7% Paper summaries

Concerning in-class clicker questions. I will use clicker questions to reinforce the main point of a lecture. Each correct answer will receive 1 point, and an absence or an incorrect answer will receive zero points. In calculating your total score for all in-class clicker questions, I will sum your scores for all days, omitting your three lowest daily scores.

Concerning the paper summaries. One of the objectives of this course is to introduce you to how economic knowledge is created and distributed (research). As a way of doing this, I will present some research papers. You are required to read the paper before I present it and complete a summary sheet which is to be given in before the presentation.

Exams:

The two midterms will be given in the evening as:

FIRST MIDTERM: Monday 11 Feb 7:00 p.m. - 8:40 p.m.

in TBA

SECOND MIDTERM: Monday 18 Mar 7:00 p.m. - 9:00 p.m.

in TBA

The final exam will be held as:

FINAL: Sunday 5 May 7:30 p.m. - 10:00 p.m.

in ECON 119

You must bring two blue-books to each exam.

Because this is a 4000-level class, the exams will not just repeat material covered in class. Some questions will follow the material covered in class and in the problem sets, but some will ask you to apply the material in a different environment.

## Failure to be present at an exam:

If you are unable to take an exam because of illness: You must get a medical note from a doctor to confirm your inability to take the exam *and* advise me of your inability *before* the exam. In this case you may take a make-up. Otherwise, unless you have obtained my prior permission to take the make-up, failure to be present for an exam will cause your score to be 0 for that exam.

# Using Clickers:

I consider it cheating if a student uses another student's clicker.

You get a green light when your answer is registered. If you get a red light, your clicker is not registering and your score is automatically zero.

# Classroom courtesy:

Please turn your cell 'phone off prior to the start of class.

I believe that learning is enhanced if there is full concentration by both the instructor and the student. To facilitate this, laptops may only be used in the front two rows of the classroom and usage of laptops in class is restricted to following the course notes.

## Accommodation for Disabilities:

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to me in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the Disability Services website (www.colorado.edu/disabilityservices/students). Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition or injury, see Temporary Medical Conditions under the Students tab on the Disability Services website and discuss your needs with me.

## Religious Holidays:

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, please let me know in a timely manner if one of the exam dates falls on a religious holiday you intend to observe and I will arrange for you to take a make-up.

#### Classroom Behavior:

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on classroom behavior and the Student Code of Conduct.

### Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation:

The University of Colorado Boulder (CU Boulder) is committed to maintaining a positive learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct, discrimination, harassment or related retaliation against or by any employee or student. CU's Sexual Misconduct Policy prohibits sexual assault, sexual exploitation, sexual harassment, intimate partner abuse (dating or domestic violence), stalking or related retaliation. CU Boulder's Discrimination and Harassment Policy prohibits discrimination, harassment or related retaliation based

on race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Individuals who believe they have been subject to misconduct under either policy should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127. Information about the OIEC, the above referenced policies, and the campus resources available to assist individuals regarding sexual misconduct, discrimination, harassment or related retaliation can be found at the OIEC website.

### Honor Code:

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the academic integrity policy. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, resubmission, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code Council (honor@colorado.edu; 303-735-2273). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code Council as well as academic sanctions from the faculty member. Additional information regarding the academic integrity policy can be found at the Honor Code Office website.

#### Course outline:

A list of topics to be covered and likely dates is shown on the next pages. This is an estimated plan. Topics may take more or less time than estimated in this plan.

# COURSE OUTLINE

<u>Approximate Date</u>	<u>Topic</u>	<u>Chapter</u>
	1. INTRODUCTION	
14, 16 Jan	INTRODUCTION Fundamental Questions of Urban Economics The need for a model Descriptions of urban areas Discussion of regression analysis - the hedonic regression of house prices	1, 2
*18 Jan	Kain, J., and J. Quigley, (1970), "Measuring the value of ho quality," <i>Journal of American Statistical Association</i> 65, 53	•
	2. FORMATION OF CITIES	
23, 25, 28, 30Jan 1, 4 Feb	EXISTENCE OF CITIES Concentration of production: importance of IRS in production-trade cities - factory cities - resource cities	3 on
	Problem Set: Base Case Problem Set: Trade Cities: Normative Problem Set: Trade Cities: Positive Problem Set: Factory Cities 1 Problem Set: Factory Cities 2 Problem Set: Resource Processing Cities 1 Problem Set: Resource Processing Cities 2 Problem Set: Resource Processing Cities 2	
6, 8 Feb	CLUSTERING OF FIRMS Externalities as a source of IRS - shared customer base - input sharing - knowledge spillovers	4 (pp. 44 - 54)
	Problem Set: Input Sharing	

# Problem Set: Knowledge Spillovers

11 Feb	Review FIRST MIDTERM (7:00 - 8:40 pm in )	
13,15 Feb	CLUSTERING OF FIRMS CONT - labor pooling - better skill matching makes workers more productive	4 (pp. 54 - 60)
18 Feb	CLUSTERING OF HOUSEHOLDS - better social matching increases worker utility	
*13 Feb	Problem Set: Labor Pooling Problem Set: Skill Matching Problem Set: Social Matching  Carlton, D.W., (1983), "The location and employment	
13 100	choices of new firms: an econometric model with discrete and continuous endogenous variables,"  Review of Economics and Statistics 65, 440-449.	
	3. METROPOLITAN POPULATION SIZE: LEVELS AND CHANGE	ES
25, 27 Feb 1, 4 Mar	POPULATION SIZE Jobs Standard of Living Model - Equilibrium City Size - Equilibrium Regional Growth	7

Limiting Growth pp. 257-258

- urban growth boundarylimiting building permits
- development fees

Problem Set: Equilibrium City Population Problem Set: Spreading beneficial effects Problem Set: Urban Growth Boundary

\*6 Mar

Helms, L.J., (1985), "The effect of state and local taxes on economic growth: a time-series cross-section approach," Review of Economics and Statistics 67, 574-582.

### 4. LAND PRICES AND LAND USE PATTERN

8, 11, 13, 15 Mar

**BID-RENT CURVES** 

10

Capitalization

11 (pp. 155-160, 169)

"Left-over principle"

- bid-rent for agriculture

- bid-rent for manufacturing firms

- bid-rent for offices

Problem Set: Factory Bid-Rent Problem Set: Office Travel Costs

18 Mar

**Review** 

**SECOND MIDTERM (7:00 - 9:00 pm in** 

20,22 Mar

**BID-RENT CURVES CONT** 

12 (pp. 175-177)

)

1,3,5,8 Apr

- bid-rent for offices (cont)

- bid rent for households

- bid-rent curves and land-use patterns

Problem Set: Office Bid-Rent With No Production Substitution

Problem Set: Residential Bid-Rent With No Consumption Substitution

Problem Set: Using Bid-Rent Curves

# 5. LAND PRICES AND LAND USE (CONT)

10, 12, 15, 17 Apr

BUILDING-UP AND SQUEEZING:

SKYSCRAPER OFFICES, HIGH-RISE APARTMENTS,

TOWNHOUSES AND APARTMENT COMPLEXES

Substitution in construction of office 11 (pp. 160 - 166) Substitution in the consumption of housing 12 (pp. 175 - 177)

Problem Set: Skyscraper Offices: Graphical

Problem Set: Skyscraper Offices: Algebra Problem Set: Apts. and Townhouses: Graphical Problem Set: Apts. and Townhouses: Algebra 19 Apr MONOCENTRIC CITY 14 Monocentric city "Edge Cities" LAND-USE POLICY 13 Policy: land-use zoning Open Space Urban sprawl Problem Set: Zoning Land as "For Agricultural Use Only." \*22 Apr Kahn, M., (2000), "The environmental impact of suburbanization," Journal of Policy Analysis and Management 19, 569-586 6. MAKE-UP OF COMMUNITIES/NEIGHBORHOODS 24,26 Apr **SORTING** 15 (pp. 224-232) Income sorting Public good/public service sorting Problem Set: Income Sorting Problem Set: Public Service Sorting \*29 Apr Honig, M., and R.K. Filer, (1993), "Causes of intercity variation in homelessness," American Economic Review 83, 248-255 1 May **Review** 

FINAL EXAM (7:30 - 10:00 p.m. in ECON 119)

5 May