CP 6331: LAND USE AND TRANSPORTATION INTERACTIONS

Georgia Institute of Technology
T/TH 9:35 – 10:55 a.m.
Rm. 259, Architecture East
Instructor: Brian Stone
Office Hours: Friday 10:00-12:00 or by appt.
Contact: stone@gatech.edu, 404.894.6488

OVERVIEW

This course is about the contemporary American metropolis and the forces that shape it. The objectives of the course are to develop a theoretical basis for understanding the decentralization of urban form during the course of the 20th century and, building on this foundation, to assess the implications of future transportation and land use decisions for urban growth and environmental quality. In the first component of the course, readings and group discussions will consider four theoretical frameworks developed to explain the economic, social, and spatial evolution of North American cities. Readings have been selected to apply a distinct theoretical lens to successive historical eras of American land use and transportation infrastructure development and to provide students with a conceptual framework through which to assess the implications of planning policies for spatial and behavioral changes within cities.

The second and third components of the course will examine the social and environmental costs of decentralized land use and the principal economic, regulatory, and design-based strategies that have been employed to mitigate the undesirable effects of metropolitan growth. As air quality and climate change hold significant implications for future urban development, a particular emphasis will be placed upon the linkages between land use, energy consumption, and air pollution. In the final component of the course, students will be introduced to the emerging integrated transport modeling framework and the major federal statutes governing the state and regional level transportation planning process. Through two lab projects, students will have the opportunity to perform their own analysis of land use and travel behavior with census demographic and travel survey data obtained from a major metropolitan area. The course will conclude with an overview of an integrated approach to land use and transportation planning.

EVALUATION

Students will be evaluated on three sets of tasks: (1) class participation and a topic presentation; (2) two lab projects; and (3) a set of exams corresponding to each division of the course. A description of each requirement and its relative weighting in grading follows:

Discussion Participation and Topic Presentation: Class sessions will consist of lecture material, group discussion, and topic presentations. Students are expected to come to each class well prepared to discuss and evaluate the assigned reading material. Each student will have the opportunity to develop a formal presentation on an identified discussion topic to be covered during a class session. For each presentation, students will be allotted 15 minutes (10-12 minute presentation followed by questions) in which to deliver a well-structured Power-Point presentation on an applied project or historical event related to the day's central theme. Student presentations will be evaluated on content, organization, visual quality, creativity, and delivery. Each student is expected to schedule a meeting with me to discuss the presentation at least one week in advance of the assigned date. In addition, students must complete a course evaluation to receive full credit for class participation. **(15%)**

Land Use – Travel Behavior Project: Through the completion of two lab assignments, students will create and analyze their own integrated land use and travel behavior

dataset. The objective of these assignments will be to construct a land use and travel behavior dataset with information acquired from the U.S. Census Bureau and a metropolitan travel survey; perform a statistical analysis; and write a technical report detailing the research question, methods, findings, and recommendations. Two lab sessions during the course of the semester will equip students with the necessary database management and analytical skills needed to perform these tasks. **(30%)**

Examinations: Students will have the opportunity to demonstrate their comprehension of course concepts and themes through three examinations. The first exercise will be a take-home essay assignment covering the material presented in the first component of the course. Students will have several days to develop responses in essay form to the questions asked. **(15%)**

Material addressed in the second and third components of the syllabus will be covered through two in-class exams. Each exam will adopt a short answer format and will be administered during the class period noted in the syllabus. **(40%)**

Please note that all written assignments (with the exception of in-class exams) are to be submitted in digital form as an email attachment and must be time-stamped prior to the designated date and time. Late submissions will be discounted a letter grade a day. It is the student's responsibility to maintain a record of all assignments submitted electronically. Also note that the grading percentages presented above may be adjusted by the instructor in response to an insufficient effort on any assignment.

The Institute policy regarding student plagiarism will be strictly enforced. It is expected that all students have a thorough understanding of the various forms of plagiarism and that questions pertaining to this policy will be resolved before the submission of any assignment. Any student found to violate the policy on plagiarism will receive a failing grade for the assignment and will be subject to disciplinary action as outlined within the Institute's Honor Code. For more information on plagiarism, please see: http://www.honor.gatech.edu/resources/plagiarism.html

TEXTS

Jackson, Kenneth. 1985. Crabgrass Frontier: The Suburbanization of the United States. New York: Oxford University Press.

Moore, T., P. Thorsnes, and B. Appleyard. 2007. The Transportation / Land Use Connection. Washington, DC: The American Planning Association, Report # 546/547.

Course Reader – assignments denoted by (R)

Texts may be purchased at the Engineer's Bookstore (748 Marietta Street). All other readings, as well as other course materials, are available as Adobe files through the course website: http://tsquare.gatech.edu