

CITY PLANNING 4030 – CP 4030 - THE CITY AND ITS TECHNOLOGY

Georgia Institute of Technology – Spring 2005
Instructor: Jamie A. Cochran, AICP

Office Hours: City and Regional Planning Program Office
By appointment (please e-mail or call for request)

E-mail: jacoch@bellsouth.net and phone (404/285-7577- cell)

COURSE SYLLABUS – 01/10/05

This course focuses on the technology of cities (urban infrastructure systems) and its role in determining the location, timing, and character of urban development. The purpose of this course is to provide undergraduate students in engineering, building construction, public policy, management, and other majors with a broad understanding of the social, political, and economic context of these urban infrastructure systems to augment their existing knowledge of how these systems are planned, designed and managed. The roles of both the private and public sectors will be discussed.

Students will learn about the institutional arrangements for planning, developing, implementing, managing, and financing these facilities. The class will also discuss the impact of urban infrastructure systems on the way cities have been designed, built, and evolved over time. Therefore, the linkages between infrastructure planning and broader growth management tools and objectives are also covered. Particular techniques, such as impact fees and capital improvements programming, are also addressed. Innovative approaches in planning infrastructure systems will also be covered. From time to time, outside lecturers will address the class and/or out-of-classroom exercises will be scheduled. By the end of the course, students are expected to know how the technological systems they plan, design, or manage influence urban development and affect communities and society at large.

Course Objectives:

This course has four major objectives:

- To enable students to understand the social, political, and legal systems within which infrastructure systems are created and operate;
- To help students identify the basic planning and management processes for designing and operating infrastructure systems;
- To provide an opportunity for students to explore some of the basic tools used in infrastructure planning, development, implementation, management, and financing and to see those tools used in “real world” settings; and
- To help students understand and analyze the impacts of how infrastructure systems have impacts on and are impacted by urban development patterns and social systems.

Students will not succeed in the course without attending class and engaging themselves in class discussions, exercises, and group activities.

Class Readings:

The course will use the textbook entitled ***Understanding Infrastructure: A Guide for Architects and Planners*** by George Rainer, P.E. Additional readings will be distributed in class. There will also be guest speakers in class who may provide written information for you to read and understand.

Course Evaluation:

Students will be graded in four areas, including class participation (20 points); three in-class quizzes (worth 20 points each; 60 total points) and a group project worth (20 points). Late assignments will be severely penalized in terms of points. The total number of possible points for the class is 100 points. There will be no final exam for the course. The following grade letters will be assigned according to the points earned in the class: A = 92 points and above; B = 82 – 91 points; C = 70 – 81 points; D = less than 70 points. Each assignment will contain a description of the point system used to evaluate the assignment.

Quizzes:

There will be three in-class quizzes held during the course. The quizzes will be based on the assigned readings, discussions, and exercises covered in the course.

Class Participation:

Attendance and active class participation will be worth up to 20 points. ***The grade is NOT based just on attending class, rather it is based on a combination of attendance, enthusiastic participation in exercises, evidence of prior preparation for class discussions, and the voluntary offering of comments and insights to further the class discussions, exercises, and other classroom activities.***

Group Project:

Each student will be part of a small group project related to the planning and development of infrastructure systems in communities. The members of each team will be assigned by the instructor. Your team will have the ability to choose its project among several options. Some time will be provided in class to coordinate the work of the team. Your team will also need to make arrangements to communicate and work together out of class. At the conclusion of the project, each team member will be evaluated by his/her team members to assure that everyone on the team contributes equally to the success of the group project. ***Contributions to the group project as reflected by the peer evaluations will affect individual grades.***

Suggestions for Student Success:

1. Readings from the textbook along with the supplemental readings will be used as part of the basis for class discussion and exercises; however, ***it will not be all of the material covered in the course.*** To get the most from this course, you should review the reading material and attend class.
2. Every effort will be made to make the class experience interesting and illuminating. To maximize the class experience, all students are encouraged to participate by asking questions, providing comments or insights, or building on the value of the discussion. The true value of class time is to learn from one another.

3. Life events occur which may prevent you from attending a class. This should be infrequent. ***Repeated absences will indicate your inability to succeed in the class. Please let me know in advance by e-mail or phone if you are unable to attend.***
4. If there are topics or concepts which you are struggling with, ***you are free at any time to contact the instructor for clarification or assistance.*** There are ample opportunities for you to discuss the course material with the instructor.

Performance Expectations

The following performance expectations have been identified for both the Instructor and the students so that mutual objectives are met for the successful completion of the course. The Instructor will:

- (1) Be available at announced regular times and locations for the student to meet, clarify, discuss, or ask questions about the course, any subject material, or his/her performance in the class.
- (2) Make every effort to present the course material in a clear and concise manner and to make the classroom experience a positive one.
- (3) Identify the requirements for all quizzes, group projects, and class participation and identify the evaluation criteria to be used for each element at the time the requirement is assigned.
- (4) Give as much advance notice as possible on the requirements for the class, assignment deadlines, and any schedule changes related to the class.

The Student will be expected to:

- (1) Take the responsibility for learning and accepting the course requirements, including quizzes, the group project, and class participation;
- (2) Meet all specified deadlines for submitting course work.
- (3) Take responsibility for reviewing the reading assignments ***before class*** such that he/she can contribute positively to the quality of the classroom time.
- (4) Make all best efforts to attend class unless high priority circumstances prevent it and to advise the Instructor if the Student is unable to attend class.
- (5) Complete the course evaluation survey at the end of the term to help identify measures that will improve the class for future students.

Honor Code:

All students should be knowledgeable of the Georgia Institute of Technology Academic Honor Code. In general, the following guidelines apply to this course.

1. The in-class quizzes should reflect the independent work of each student. Previous quizzes will be of minimal value to students since the class materials have been altered from previous course offerings.
2. The group project should be a collaborative effort with each individual contributing his/her share of the project. All group members will have an opportunity to evaluate their team mates' contributions.

Class Outline

The following reading assignments refer to the required textbook ("Understanding Infrastructure: A Guide for Architects and Planners" – All reading assignments should be read PRIOR to the class for which it is assigned.

Week	Day	Reading Assignments and Activities
1	January 11	NO CLASS TODAY – Read assigned handouts
	January 13	Class Overview – The Community Planning Process and its Impact on Infrastructure- read handout
2	January 18	Institutional and Financial Arrangements for Providing Infrastructure and Services (Chapter 12)
	January 20	Managing Infrastructure Systems – read handout
3	January 25	Water Systems (Chapter 1)
	January 27	Sewers and Storm Drainage (Chapter 2) and Solid and Hazardous Wastes (Chapter 3)
4	February 1	In-Class Project Planning Session
	February 3	NO CLASS TODAY
5	February 8	Energy (Chapter 4) and Telecommunications (Chapter 5)
	February 10	Review Session
6	February 15	QUIZ # 1
	February 17	Streets (Chapter 6)
7	February 22	Bridges (Chapter 7)
	February 24	Waterfront Infrastructure (Chapter 8)
8	March 1	Rail, Transit, and Aviation (Chapter 9)
	March 3	Buses (Chapter 10)
9	March 8	Parks and Recreation (Chapter 11)
	March 10	Emerging Trends in Urban Design and Infrastructure Systems – read handout
10	March 15	Review Session
	March 17	QUIZ # 2
11	March 22	SPRING BREAK – NO CLASS
	March 24	SPRING BREAK – NO CLASS
12	March 29	Site Planning and the Development Approval Process – read handout
	March 31	Neighborhood and Small Area Planning and Infrastructure Issues – read handout
13	April 5	Regional Planning and Infrastructure Development – read handout
	April 7	In-class Project Planning Session
14	April 12	Written Project Summaries Due – Group Project Presentations – class will evaluate projects
	April 14	Group Project Presentations – class will evaluate projects
15	April 19	Group Project Presentations – class will evaluate projects
	April 21	Review Session
16	April 26	QUIZ # 3
	April 28	Make-up Day (if needed)