

## **Urban Sprawl and Public Health**

### **Rollins School of Public Health of Emory University Georgia Institute of Technology**

#### **Overview**

This course, offered simultaneously to students at Emory and Georgia Tech, introduces students to the concept of urban sprawl as a public health issue. It begins by defining sprawl, introducing key concepts of urban and regional planning and presenting data on recent demographic trends. It then introduces the major public health impacts of sprawl: air quality, urban heat island effects, exercise and physical activity patterns, pedestrian and motor vehicle injuries, water quantity and quality, mental health consequences, and civic life. For each public health issue, students will review the public health methodologies (such as epidemiologic surveillance) that yield data, assess the available data on public health impacts of sprawl, and analyze the public policy implications. The course will end with a survey of policy initiatives that address sprawl, such as regional transportation plans, new urbanism and other architectural, land use, and planning strategies, and energy policy, evaluating the public health implications of these initiatives. Throughout the course there will be a focus on Atlanta as a case study.

#### **Goals**

Following this course students will be able to:

1. Define urban sprawl and discuss its principal defining features, including demographic data, planning, zoning, and development practices, and historical trends since World War II.
2. Identify the major public health implications of urban sprawl.
3. Identify the kinds of public health data used to evaluate public health implications of sprawl, and the limitations of each data source.
4. Identify current public policy trends that address sprawl, and describe the expected public health implications of each.

#### **Faculty**

Howard Frumkin, M.D., Dr.P.H.  
Professor and Chair  
Department of Environmental and Occupational Health  
Rollins School of Public Health of Emory University

Lawrence Frank, Ph.D.  
Associate Professor  
School of Architecture  
Georgia Institute of Technology

## Class Format

The class will be conducted as a seminar, meeting once weekly for a two-hour session. Students will complete a reading assignment prior to each class and will be expected to be prepared to discuss it. There will be quizzes at the four-week and the eight-week points, and a final paper will be assigned for completion at the end of the semester.

## Evaluation

Student evaluations will be based on performance on two quizzes (one third), a final paper (one third), and class participation (one third).

## Detailed Class Syllabus

Class Session	Topic	Readings	Instructor
1	Course introduction The city in history Introduction to sprawl	Selections from Jackson, <i>Crabgrass Frontier</i>	Frank, Frumkin
2	Introduction to sprawl (continued): history, demographic data, transportation, design, and zoning issues	Selections from Barfield, Raimi, and Chen, <i>Once There Were Greenfields: How Urban Sprawl is Undermining America's Environment, Economy and Social Fabric</i> and Garreau, <i>Edge City</i> . Reid Ewing, <i>Characteristics, Causes and Effects of Sprawl: A Literature Review</i> . <i>Environmental and Urban Issues</i>	Frank, Frumkin
3	Introduction to public health: paradigm, epidemiologic data, prevention, agencies	Lecture notes	Frumkin
4	Quiz # 1		
	Guest speaker: Atlanta sprawl trends (Research Atlanta or ARC)		
5	Sprawl, air pollution and health	Lecture notes	Redd
6	The urban heat island, sprawl, and health	Lecture notes	Quatrocchi

7	Sprawl, physical activity, and public health	<i>How Land Use and Transportation Systems Impact Public Health: A Literature Review of the Relationships between Physical Activity and Built Form.</i> ACEs Working Paper #1. Division of Nutrition and Physical Activity, National Center for Chronic Disease Prevention and Health Promotion, CDC. 2000.	Dietz
8	Sprawl and traffic and pedestrian injuries	Surface Transportation Policy Project. <i>Mean Streets: Pedestrian Safety and Reform of the Nation's Transportation Law</i>	Schieber
9	Quiz #2		
	Sprawl and mental health	Selections from <i>Commuting Stress</i> , and Frumkin, <i>Beyond Toxicity: The Health Benefits of Nature Contact</i> , <i>Am J Prev Med</i> 2001.	Frumkin
10	Sprawl, civic life, and mental health	Atlanta Social Capital report, Atlanta Community Foundation, 2001.	
11	Guest speaker: Atlanta's response to sprawl.		Katherine Ross
	Guest speaker: Environmental justice and sprawl	Selections from <i>Sprawl City</i> .	Robert Bullard
12	Trends in regional planning policy	Selections from <i>The New Urbanism : Toward an Architecture of Community</i> and <i>A Better Place to Live: Reshaping the American Suburb</i> and <i>How Smart Growth Can Stop Sprawl</i>	
13	Trends in transportation planning		Frank
14	Presentation of student papers		Frumkin, Frank
15	Presentation of student papers		Frumkin, Frank