Sustainable Urban Development

New York University
Wagner Graduate School of Public Service
UPADM-GP 217 – 001
Spring 2015
Tuesdays and Thursdays 6:45-8:00 PM
Location: 25 West 4th, Room C-11

Instructor

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Office Hours: Thursday, 4-6 PM or by appointment.

Course Description

According to current estimates of the World's population, in the first decade of the 21st Century the number of people living in urban areas exceeded the number of people living in rural areas for the first time and current global population growth projections indicate that most of the population expansion in the rest of the century will take place in urban areas of the developing world. This course examines the social, economic and environmental dimensions of sustainable development in urban areas. Some of the major themes explored include indicators of sustainability, urban demographic trends, poverty, green building, urban sprawl, environmental justice, sustainable energy and transportation, water use, waste management and global climate change. In addition, the role of information technology (IT) and information and social networks in promoting sustainable development and the diffusion of ideas globally will be explored.

Course Readings:

Three books will be used in the course. They are available at the NYU Bookstore (located at 726 Broadway). They are:

Required books:


Recommended:


These books will also be available in the Course Reserves Desk, on Lower Level 2 of Bobst Library.

Additional readings from academic journals, agency reports and other sources will also be used.

Class Assignments and Grading

1. Short assignments

There will be four short assignments throughout the semester and they will be 60% of the grade.

2. Final assignment

The final assignment will provide students with the opportunity to explore an urban area through the topics covered in the course in more detail. It will be 30% of the grade.

3. Class attendance and participation

Students will be expected to actively participate in class discussions. Class attendance and participation will be 10% of the grade.

Schedule of Lectures and Topics

1. What is sustainability?

January 27 and 29. Introduction to the course and overview of the syllabus. Introduction to the concept of sustainable development and how it applies to urban areas.

2. Trends in urban population growth and urbanization

3. Urban areas and global climate change

February 10 and 12. Discussion about global climate change and its impact on cities and urban areas. Topics explored will include climate change mitigation and adaptation to sea level rise, extreme weather events and changes in temperature.

4. Measuring sustainability

February 17 and 19. How do we measure sustainability? Discussion of indicators of sustainability, including composite indexes of sustainability, and their application to cities and urban areas.

5. Environmental justice, social equity and social dimensions of sustainability

February 24 and 26. Discussion about the social dimension of sustainability in cities, including environmental health risks, vulnerable populations and environmental justice.

6. Urban sprawl and smart growth

March 3 and 5. Discussion about urban sprawl and smart growth. Definitions, trends and projections. Factors affecting and driving urban sprawl.

7. Green buildings and sustainable housing

March 10 and 12. Discussion about green building and housing. Description of the LEED (Leadership in Energy and Environmental Design) Green Building Rating System.

March 17 and 19 – Spring Recess – No class

8. Sustainable transportation

March 24, 26 and 31. Discussion of sustainable transportation systems and vehicles. Trends in transportation use and modes of transportation. Discussion of innovative case studies such as the bus rapid transit system of Curitiba, Brazil and the Cable Car of Medellín, Colombia. Air pollution and public health.

9. Sustainable energy


10. Sustainable use of materials and waste management

11. Sustainable water use

April 21 and 23. Trends in water use, wastewater treatment and water scarcity. Access to clean water and sanitation, water pollution and public health in urban areas in different regions of the world.

12. Urban areas, parks, public spaces and biological diversity

April 28 and 30. Rates of urbanization around the world suggest urban areas will continue to grow and replace natural areas. Examples from Brazil, South Africa and the United States will be used to discuss how urban areas are affecting biodiversity hotspots and how urban parks and green areas can contribute to biodiversity conservation while providing environmental services for people.

13. IT and Sustainable Development

May 5. The role of information technology in the diffusion of ideas related to sustainable urban development.

14. Future Sustainable Development