Sustainable Cities in a Comparative Perspective

New York University
Wagner Graduate School of Public Service
P11.2613
Fall 2010
Wednesday, 8:35-10:15 PM
Silver Center for Arts and Science, Room 701

Instructor

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Course Description

According to estimates by the United Nations, between 2000 and 2030 the share of the world’s population living in urban areas will increase from 47% to 60%, with the fastest growing cities located in developing countries. This course examines the social, economic and environmental dimensions of sustainability in cities. Policies and programs that try to address the challenges of sustainability from both developed and developing countries are studied and compared. Opportunities for avoiding unsustainable practices in developing countries through the use of modern technologies are also analyzed. Some of the major themes explored in the context of the sustainability of cities are indicators of sustainability, demographic trends, poverty and income distribution, green building, urban sprawl, air and water quality, global climate change, and sustainable energy and transportation policies.

Course Readings:

Two books will be required for the course. They are both available at the NYU Bookstore (located at 726 Broadway, New York, NY 10003). They are:


These books will be available in the Course Reserves Desk, on Lower Level 2 of Bobst Library.
Class Assignments and Grading

1. First Short Assignment

This assignment will be 15% of the grade. The assignment is due October 6.

2. Second Short Assignment

This assignment will be 15% of the grade. The assignment is due October 27.

3. Third Short Assignment

This assignment will be 15% of the grade. The assignment is due November 24.

4. Class participation

Students will be expected to actively participate in class discussions. Class participation will be 15% of the grade.

5. Final paper

The main assignment for the course will be a final paper. This assignment will be 30% of the grade. The final assignment is due December 9.

6. Final paper presentation

Students will make a presentation to the class. The presentation will be 10% of the grade. Class presentations will take place on December 1, 8 and 15.

Schedule of Lectures, Topics and Reading Assignments

1. What is sustainability?

September 8. Introduction to the course and overview of the syllabus. Introduction to the concept of sustainability and how it applies to cities and urban areas.

Readings

2. Trends in urban population growth and urbanization

September 15. Current and past trends in urbanization and growth of cities. Emergence and growth of mega-cities. Differences in current and projected urbanization growth rates in developed countries and developing countries. Social indicators and general health issues in rapidly growing urban areas.

Readings

Suggested readings


3. Measuring sustainability

September 22. How do we measure sustainability? Discussion of indicators of sustainability and how they can be applied to cities and urban areas.

Readings


Suggested readings


4. Urban areas and global climate change

September 29. Discussion about global climate change and its impact on cities and urban areas. Topics explored will include sea level rise, extreme weather events and changes in temperature.
5. Urban sprawl and smart growth


Readings


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

Readings


Suggested readings


7. Green buildings and sustainable housing


Readings

• *The Sustainable Urban Development Reader*, “Urban Sustainability at the Neighborhood or District Scale,” pages 409-426.

Suggested readings


8. Sustainable transportation

October 27. Discussion of sustainable transportation systems and vehicles. Trends in transportation use and modes of transportation. Can developing countries learn from developed country experiences? Discussion of innovative case studies in developing countries such as the bus rapid transit system of Curitiba, Brazil and the Cable Car of Medellin, Colombia. Air pollution and public health.

Readings

• Blackboard, “Mobility on Demand – Future of Transportation in Cities,” Smart Cities, MIT Media Laboratory, June 2008.

Suggested readings


9. Sustainable energy use


Readings


Suggested readings


10. Sustainable use of materials and waste management

November 10. Trends in material use and waste production. Factors affecting waste production, re-use and recycling. Introduction to eco-efficiency.

Readings


Suggested readings


11. Sustainable water use

November 17. Trends in water use, water treatment and water scarcity. Differences in access to water in urban areas in developed and developing countries. Differences in use of water treatment technologies around the world. Access to clean water and sanitation, water pollution and public health in urban areas.

Readings


Suggested readings

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

November 24. 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.

Readings


Suggested readings

13. Student presentations

December 1. First set of student presentations.

14. Student presentations


15. Student presentations

December 15. Third set of student presentations.