Sustainable Cities in a Comparative Perspective

New York University
Wagner Graduate School of Public Service
P11.2613
Fall 2009
Wednesday, 8:35-10:15 PM
Silver, Room 704

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 Professional Bookstore (located at 530 La Guardia Place). They are:


Additional readings will be assigned from a course packet available at Unique Copy Center, from the course’s Blackboard site and from the Internet.
The course packet and the two books used in the course will also be available in the Course Reserves Desk, on Lower Level 2 of Bobst Library.

Class Assignments and Grading

1. First Short Paper

First short paper. This assignment will be 15% of the grade. The assignment is due October 14.

2. Second Short Paper

Second short paper. This assignment will be 15% of the grade. The assignment is due November 18.

3. Class participation

Students will be expected to actively participate in class discussions. Class participation will be 20% of the grade.

4. Final paper

The main assignment for the course will be a final paper. This assignment will be 40% of the grade. The final assignment is due December 9.

5. Final paper presentation

Students will make a short presentation to the class. The presentation will be 10% of the grade. Class presentations will take place on December 2, 9 and 16.

Schedule of Lectures, Topics and Reading Assignments

1. What is sustainability?

September 9. 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 16. 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

3. Measuring sustainability

September 23. How do we measure sustainability? Discussion of indicators of sustainability and how they can be applied to cities and urban areas.

Readings

- Taking Sustainable Cities Seriously, Chapter 2, pages 31-75.
- Blackboard, Sustainable Cities or Cities that Contribute to Sustainable Development?” David Satterthwaite, Urban Studies, Vol. 34, No. 10, pages 1667-1691.

Suggested readings

4. Urban sprawl and smart growth


Readings

- Taking Sustainable Cities Seriously, Chapters 4 and 7, pages 101-123 and 177-219.

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


Readings

- Kent E. Portney. Taking Sustainable Cities Seriously, Chapters 5 and 6, pages 125-175.
Suggested readings


6. Green buildings and sustainable housing


Readings

• The Sustainable Urban Development Reader, “Introduction to the LEED Rating System,” pages 273-278.
• The Sustainable Urban Development Reader, “Urban Sustainability at the Building and Site Scale,” pages 397-405.
• The Sustainable Urban Development Reader, “Urban Sustainability at the Neighborhood or District Scale,” pages 409-426.
Suggested readings


7. Sustainable transportation

October 21. 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

Suggested readings

- Web, “Hypercars, hydrogen, and the automotive transition,”
  http://www.rmi.org/images/other/Trans/T04-01_HypercarH2AutoTrans.pdf

8. Sustainable energy


Readings

- Blackboard, “How far can you drive on a bushel of corn? Crunching the numbers on alternative fuels.” Mike Allen. Popular Mechanics. May, 2006 issue. (Also available online at:
Suggested readings

  http://www.rmc.sierraclub.org/energy/library/sustainablecities.pdf#search=%22sustainable%20cities%20energy%22

9. Sustainable use of materials and waste management

November 4. Trends in material use and waste production. Factors affecting waste production, re-use and recycling. Introduction to eco-efficiency.

Readings


Suggested readings

10. Sustainable water use

November 11. 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

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

November 18. 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

- The Sustainable Urban Development Reader, “City and Nature,” pages 139-144.

Suggested readings


12. Urban areas and global climate change

November 25. 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.

Readings


Suggested readings


13. Student presentations

December 2. First set of student presentations.

14. Student presentations


15. Student presentations

December 16. Third set of student presentations.