Image source: UN ESCAP (2011) Are we building competitive and liveable cities?

Advanced Urban Infrastructure Planning

UAP 5854G / Fall 2014 / 3 credits / Tue & Thu 11:00am–12:15pm / Architecture Annex 111

Instructors: Yehyun An (yehyun@vt.edu), Ralph P. Hall (rphall@vt.edu)

This course will explore the emerging concepts, principles, and methodologies used to advance sustainable urban infrastructure planning. In particular, it will study national and international cases of infrastructure development, with an emphasis on projects in the US and India.

Urban infrastructure systems play a critical role in facilitating economic development and raising quality of life. However, the resource, energy, and capital-intensive characteristics of infrastructure can result in negative environmental and social impacts. Over the past two decades, the concept of sustainability and how it can be incorporated in the planning, design, and development of new infrastructure has gained significant attention. Sustainability principles have also been applied to the management of existing infrastructure.

Upon completion of the course, students will be able to:

[1] describe an infrastructure system using accurate terminology;
[2] demonstrate an understanding of the main concepts and principles of infrastructure planning;
[3] identify the key features of a sustainable infrastructure system and explain how they promote sustainable development;
[4] apply analytical tools for infrastructure planning;
[5] critically evaluate infrastructure cases/projects/proposals through the lens of sustainability; and
[6] identify the gaps between theoretical principles of sustainable infrastructure and their application in practices.

This course is an elective for the Graduate Certificate in Global Planning and International Development Studies. For more information see: http://globalcert.spia.vt.edu/.