Water affects the design of every building, site, and city in aesthetic, functional, and symbolic ways. This course examines issues of water-conserving design in different regions of the world, with a focus on the U.S. and South Asia. In addition to lectures and discussion, workshop participants will develop water-conserving design proposals at the site, neighborhood, and comparative international scales. This Workshop has four main aims:

1. To provide a systematic introduction to the rapidly growing field of water-conserving urban design, with an emphasis on landscape innovations.
2. To cultivate an understanding of the growing role of stormwater management in urban landscape design, which includes combined sewer overflows, best management practices for stormwater management, and strategic planning for sustainable community development.
3. To situate urban stormwater design within an ecological perspective that encompasses climate, geology, soil, and plant and animal communities.
4. To study the historical geography of design innovations in different regions of the world as a way to generate and evaluate design alternatives.

Each year the workshop focuses on conceptual design of a project in the US for a particular client where analogies between innovative precedents in cities of South Asia help “expand the range of choice” among design alternatives. This year the class will focus on the ultra-urban Mill Creek watershed of West Philadelphia in light of the Philadelphia Water Department’s bold program of stormwater management. Our project focuses on creative water-conserving design in Philadelphia and comparable sites in South Asia. Water-conserving design ranges from rooftop rainwater harvesting to constructed wetlands and riparian buffers. It emphasizes rainwater infiltration through porous paving, rain gardens, bioswales, soil aeration, engineered soils, etc. Adoption of these methods can reduce drainage infrastructure, combined sewer overflows, and flood peaks from certain types of storms, as well as pollutant loading.