

SYLLABUS -ARCH 4803RD/8803RD – GREEN INFRASTRUCTURE AND SUSTAINABLE COMMUNITIES
A Serve-Learn-Sustain Course College of Design Tues/Thurs 4.30-6.00 pm Spring 2019

Instructors: Richard Dagenhart, Thomas Debo, Jason Gregory and Guests

NOTE: REGISTRATION FOR THIS WORKSHOP IS BY PERMIT ONLY TO INSURE THAT THE CLASS IS INTERDISCIPLINARY – ESPECIALLY ORIENTED TO ARCHITECTURE, CITY PLANNING AND ENVIRONMENTAL ENGINEERING.

For a permit – email Richard Dagenhart – rdagenhart@gatech.edu



OVERVIEW:

This course is an interdisciplinary design workshop involving seminars, case study presentations, and collaborative design projects focusing on the design green infrastructure. Green infrastructure is not only concerned with contemporary stormwater management practices and utility but also with site design of architecture projects and the design in the public domain which involves amenity, recreation, and community education.

There are two primary objectives of the workshop.

First is for students, from multiple disciplines, to learn about water and its importance in project planning and design for sustainable communities, from the scale of the building to neighborhood to city and region.

Second is for students from different disciplines – architecture, planning, engineering – to participate together in interdisciplinary teams to design collaborative for a green infrastructure design project.

LEARNING OUTCOMES

Understand water as fundamental to sustainable design in the relationships among ecological, economic and social systems, from the scale of buildings, to sites, to neighborhoods and cities.

Understand the history and development of urban stormwater management and contemporary efforts to make green and blue infrastructure as the foundation of sustainable communities.

Understand the hydrologic cycle and **be able** to calculate stormwater flow characteristics for small drainage basins and sites using simplified methods, including familiarity with more advanced stormwater modeling tools.

Understand topography, grading and other technical considerations of site and project design and **be able** to apply those to the design of a collaborative green infrastructure project.

Understand the range of green infrastructure tactics and their technical and construction requirements and **be able** to apply those tactics to a project design strategy and assess their potential performance.

Understand the importance of water resources and sustainable stormwater design in the transformation of our professions – architecture, urban design, planning, building construction and engineering.