

Making Silver Line Sustainable – A LEED-ND Studio



Sustainable urbanism is a new framework for interdisciplinary planning and design of contemporary urban neighborhoods. It explores sustainability and urban design by focusing on the processes that shape the form and function of the built environment in its full complexity – land developments, built landscapes, ecosystems, infrastructures, and facilities – that collectively make up urban regions. LEED for Neighborhood Development (LEED-ND) is a rating system for neighborhood planning and development based on the combined principles of **smart growth**, **New Urbanism**, and **green infrastructure and building**. This rating system is designed primarily for the planning and development of new green neighborhoods, whether infill sites or new developments proximate to diverse uses or adjacent to connected and previously developed land.

This studio intends to use the LEED-ND rating system as a framework to equip students with a fundamental understanding and practical skills to realize sustainable urbanism principles into our real world. This studio will explore the potential ecological improvements of applying LEED-ND and other green building standards in the areas along the proposed LYNX Silver Line around Charlotte. Students in this studio will have an opportunity to model, render and analyze alternative scenarios of building height and massing changes; open space design; roof, street wall and pedestrian environment design, and those that they themselves devise in order to meet criteria of green development. These criteria may address such issues as habitat restoration and creation; native vegetation; tree canopy cover; green building envelopes; stormwater runoff management; graywater detention and harvesting; local food production; diversification of open space utility; energy conservation, and more.

This studio will engage both collaborative research and design environments. Working individually and collectively, students will engage site mapping (including the use of GIS), diagramming and data analysis, precedent research, master-planning and visioning processes, as well as urban open space and streetscape design processes, buildings and urban form explorations.