Green Construction focuses on strategies and technologies to improve the energy efficiency and performance of buildings, and to reduce the environmental impact of buildings. The course emphasizes technical aspects of building design, materials selection, construction processes, and building operations. The use of objective criteria for assessing building “green-ness”, from meta issues such as building location and site – to operational details such as the selection of building technologies and systems down to the use of cleaning chemicals, is stressed throughout the course. The course will provide detailed information of the use of assessment methods in design.

The course is open to graduate students in the Schools of Design and Engineering and to undergraduate students by permission of instructor. The course is part of the undergraduate certificate in sustainable architecture.

Course Structure
The course is primarily a lecture course, completed by YouTube lectures of the leading minds in the field. We will explore practical and far reaching aspects of designing and building green. Site visits to green buildings, on the Georgia Tech campus, and to the Southface headquarters building are anticipated.

Grading
Grading will be based on short homework assignments, a mid-term exam, on one longer-term research project or group project and on class participation. Your participation in class discussions – in reaction to the assigned readings, homework, and lectures – along with class attendance, is expected.

Topics
The planned lectures for the course are listed below. The order of the lectures will be based on the availability of outside participants

- Ecology/Environmental Movement/Social Justice
- Global Energy Picture
- Energy Use in Buildings
- Energy, Thermal Science and Building Mechanical Systems
- Rating Systems
- LCA/LCC: Life Cycle Costing
- LCA: Life Cycle Analysis
- Residential Construction and Green Technologies
- Building Site Climate Analysis: solar and wind
- Building Energy Modeling
- Green Energy Production
- SouthFace Tour + Eco-Office Tour