ARC 2470 Introduction to the Technology of Architecture

Instructor: Dobson, R. Goodwin, Martineau
Prerequisites: None

Course Overview:

This course is the beginning of the technology sequences in the area of structures, environment technology, and materials and methods of construction. It introduces the response of buildings to the natural and built environments; the impact of the built environment on the natural environment; the strength, stiffness, and durability in building materials; and the quantitative methods of analysis and design of building assemblies and supports systems. It explores the relationship between building technology and the social, aesthetic, environmental, and economic aspects of the settings in which buildings are located and how these factors relate to the process of architectural design. Examples from the past and present, as well as speculation about future technologies, are used to support the principles and processes discussed in the course.

Learning Objectives:

1. To understand basic principles of building structures, environmental systems, building systems, building service, and material assemblies.
2. To understand sustainable design as central to architecture.
3. To introduce the principles that underlie building form and logic.

Course Requirements:

The course consists of two lectures a week and one field trip to a building completed or under construction or a lab. There are several projects where students explore in model form the core concepts of the course. Approximately two-thirds of the course grade is based on exams and one-third on course projects and quizzes. Exams require responses in the form of short essays and annotated drawing. It uses field trips to buildings completed and under construction and lab projects to supplement the lectures, exercises, and reading assignments.

These are two required books: *How Buildings Work* by Edward Allen and *Structure and Architectural Design* by Corkill, Puderbaugh, and Sawyers.