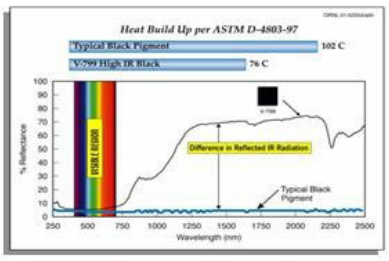
Architecture 555 "Building Systems and Energy Conservation"

Credit Hours: 3 (Seminar)
Time: 8:30 - 11:30 a.m. Wednesdays,
Class: Art & Arch. Bldg. Room 2227 A & A
Laboratories: BT Computer Lab., Rm1221, A & A
Instructor: Mojtaba Navvab, Ph.D., FIES, moji@umich.edu

Description: This course evaluates all building systems and services concerning their influence on design. Of particular interest are a response to climatic factors and internal functions, integration of building envelope (i.e., daylighting systems)and environmental controls, choice of materials and construction processes, HVAC systems and their operation including solar, wind and their energy production, energy conservation, building automation, controls for facility management and operation, and initial costs versus life-cycle costs. Case studies of various building types and systems analyses are presented.

Seminar Topics:

Energy Analysis Tools
Energy-Efficient Building Shell
Environmentally Preferable Materials and Products
Environmentally Responsive Site Planning
High-Performance HVAC
High-Performance Electric Lighting
High-Performance Daylighting
LEED application and complaisance
ASHRAE Standards Application and Compliance
Life Cycle Cost Analysis
Renewable Energy (solar, wind)
Safety and Security
Superior Indoor Air Quality
Acoustic, Thermal, Visual Comfort,
Water Efficiency
Building Commissioning



Book: Recommended

Mechanical and Electrical Equipment for Buildings, Stein, B., 1992, **ISBN-13: 978-0471156963, ISBN-10: 0471156965**