ARC 4610, Environmental Systems in Architecture, 3 credits.

The course provides an understanding of mechanical systems: thermal comfort, indoor air quality, active and passive climate control approaches, daylighting, acoustics, energy utilization, fire protection, sanitation systems. Technical problems associated with providing quality environments for human habitation are also addressed.

Course Goals & Objectives:

Understanding the principles of environmental systems.
Understand basic terminology and measurement units.
Understand key mechanical system functions.

Student Performance Criterion/a addressed:

B.8 Environmental Systems
Understanding the principles of environmental systems' design such as embodied energy, active and passive heating and cooling, indoor air quality, solar orientation, daylighting and artificial illumination, and acoustics; including the use of appropriate performance assessment tools.

Topical Outline:

Active + Passive Design Strategies  50%
Human Comfort and IAQ  10%
Daylighting  10%
Acoustics  10%
Solar orientation  10%
Artificial illumination  10%

Prerequisites:

Admission to Upper Division

Textbooks/Learning Resources:


Offered:

Spring only; annually

Faculty assigned:

Thomas Martineau (Adjunct)