Course Description

This course focuses on developing fundamentals necessary for HVAC analysis and design, and should be useful for students interested in design and project management, including mechanical, environmental and facilities engineers. The appropriate thermodynamic, heat transfer, and digital control principles are applied to problems encountered in this field. Quantitative analyses (i.e., numerical problems) are stressed through homework and examination. The topics that will be covered are listed below. A particular emphasis will be placed on the latest computer methods for building energy analysis and case studies.

Required/Recommended Textbooks


-Required? (Y)

Course Outline

HVAC System Design
Moist Air Properties
Heat Transmission
Solar Radiation
Heating Load
Cooling Load
Pumps
Fans
Direct Contact Heat and Mass Transfer
Heat Exchangers
Building Controls
Code of Academic Integrity

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity of the Student Honor Council, please visit http://shc.umd.edu/SHC/HonorPledgeInformation.aspx.