

QUANTITY SURVEYING / CONSTRUCTION ESTIMATOR SYLLABUS - MECHANICAL

109 Heating, Ventilation and Air Conditioning Design April 18, 2001
Course No. Descriptive Title Revision: 2 February, 2003

Course Description

This course deals with the development of the principles of design of the heating ventilation and air conditioning installations found on the types of buildings studied in Mechanical Technologies I and II, including calculations involved.

Suggested Prerequisites: None

Learning Outcomes

The student will be able to

1. demonstrate an understanding of the factors to be considered in the design process
2. perform basic calculations based on given criteria.

Course Content:

The student will study the following:

1. from the text Mechanical and Electrical Systems for Buildings
 - a. Chapter 1 Energy Sources for Buildings
 - b. Chapter 2 Comfort, Climate, and Design Strategies
 - c. Chapter 3 Sites and Resources
 - d. Chapter 4 Heatflow
 - e. Chapter 5 Designing for Heating and Cooling
2. from the text Means Mechanical Estimating Standards and Procedures
 - a. Chapter 17 Heat, Ventilating and Air Conditioning
 - b. Chapter 18 Ductwork
 - c. Chapter 19 Insulation
 - d. Chapter 21 Supports, Anchors and Guides.

Required Textbooks and Materials:

1. Mechanical and Electrical Systems for Buildings, by Stein/Reynolds/McGuinness
2. Means Mechanical Estimating Standards and Procedures, by Moylan/Mossman.

Testing:

Emphasis will be placed on:

1. design criteria to be considered
2. problem solving and design.