

**QUANTITY SURVEYING / CONSTRUCTION ESTIMATOR SYLLABUS - MECHANICAL**

**104**                      **Plumbing & Fire Protection Design**                      April 18, 2001  
Course No.              Descriptive Title                      Revision: 2                      February, 2003

**Course Description**

This course is the development of the principles and the design of the plumbing and fire protection installations found in the types of buildings studied in Mechanical Technology I. Included is the calculation of loads and the application of plumbing and fire protection codes.

**Suggested Prerequisites:** ..... 102 Mechanical Technology I

**Learning Outcomes**

The student will be able to :

1. demonstrate an understanding of the principles of plumbing design.
2. demonstrate an understanding of the principles of fire protection design.

**Course Content:**

The student will study the following:

1. from the text Mechanical and Electrical Systems for Buildings
  - a. Chapter 7 Water and Basic Design
  - b. Chapter 9 Sizing of Water Pipes
  - c. Chapter 10 Design of Residential Waste Piping
  - d. Chapter 13 Fire Protection
  
2. from the text Means Mechanical Estimating Standards and Procedures
  - a. Chapter 13 Piping
  - b. Chapter 15 Plumbing Systems
  - c. Chapter 16 Fire Protection.

**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. the candidate's understanding of the design principles.
2. the application of the design principles including design of simple systems.