



Air Conditioning and Refrigeration

Two-Day Class

I. Introduction and Overview

- Attendees Introduction
- Objectives and contents of the Course
- Use of AC and Chilled water systems

II. Refrigeration Theory

- Thermodynamics ... Heat transfer theory
- Chilled water refrigeration cycle
- Compression cycle theory
- Absorption cooling theory

III. Refrigerants

- EPA608 certification requirements
- Types of refrigerants
- Absorption refrigerants

IV. System Components

- Compressors
- Evaporators
- Metering (Expansion) Devices
- Heat rejection systems

V. Controls and control systems

VI. Pumps

- Pump theory
- Centrifugal pump operation
- Pump maintenance

VII. Piping Systems

- Open Loop
- Closed loop
- ;Materials of Construction

VIII. Conditioned Space Systems

- Fan coil Units
- Air filters