

# Mechanical Services Explained

## Agenda

### DAY 1 - Heating

#### 10:00      **Session 1: Heating Heat Transfers in Buildings**

- How heat is lost from buildings
- How to reduce energy use: calculation of building heat loss
- A brief review of the latest Building Regulations

#### **Session 2: Ventilation**

- Increasing the importance of ventilation heat loss
- Fresh air requirements

13:30      *Lunch (30 mins)*

#### 14:00      **Session 3: Heating Systems**

- A review of the advantages & disadvantages of the different types of heating system

#### **Session 4: Plant Sizing and Controls**

- Energy Trends
- Boiler Sizing
- Effective & efficient controls & types of control system

#### **Q & A**

16:00      **End of Day One**

For more information about this course contact the training team:

[training@cibse.org](mailto:training@cibse.org) | [cibse.org/training](http://cibse.org/training) | +44 (0)20 8772 3660

## Day 2 – Cooling and Air-Conditioning

### 10:00      **Session 1: Cooling and Air Conditioning**

- Heat Gains & Assessment of Cooling Loads
- How to calculate a cooling load
- How to reduce cooling & plant requirements

### **Session 2: Air Conditioning Systems**

- A review of the different a/c systems available & their relative merits
- Latest Developments

13:30      *Lunch (30 mins)*

### 14:00      **Session 3: Plant & Equipment**

- Types of equipment & their standards of use e.g. fans, filters, heat exchangers & humidifiers

**Q & A**

16.00      **End of Day Two**

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## Day 3 – Water Services

### 10:00      **Session 1: Refrigeration**

- Understanding how refrigeration works
- The refrigeration cycle
- plant & equipment
- the issues associated with refrigeration systems

### **Session 2: Water Services**

- Hot & Cold-Water Services: Explanation of different water service systems including current developments.

### **Session 3: Legionnaires Disease**

- Explanation of Legionnaires Disease
- consideration of its wider impact on Building Services Engineering
- professional responsibilities

13:30      *Lunch (30 mins)*

### 14:00      **Session 4: Drainage**

- A brief overview of the principles of drainage systems above & below ground and their design

### **Session 5: Building Regulations**

- The course concludes with a review of the significant impact of the latest Building Regulations

**Q & A**

16.00      **End of Day Three**

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