

# FCME-1 Course Outline

## Course Overview

This 3-day course provides essential information necessary to design, install, configure and troubleshoot FireTide wireless networks. You will receive in-depth knowledge of mesh, Wi-Fi, and video surveillance networks and leave with a solid foundation from which to successfully design and deploy a stable high-speed wireless network. You will have extensive hands on opportunities with FireTide equipment utilizing the most current HotView interface. All labs are designed to illustrate class topics and are infused with real-world data and design parameters. Classes are limited to 8-12 students.

## Who Should Attend?

Network engineers, RF installers, and technical managers responsible for mesh network design, site surveys, installation and on-going customer support.

## Prerequisites

Basic understanding of wireless concepts and design methodologies.

## Laptop Requirement

Students need to provide their own laptop: PC running Windows XP or Vista, or Macintosh with Windows (PC) OS or virtual machine.

## Tuition

Per student price for training sessions is \$1350 for a 3-day class. Tuition does not include airfare, hotel, food, car rental or other expenses.

## Registration & Schedules

Call FireTide at +1 408-355-7271, or visit the FireTide HotFusion partner portal at <http://partners.firetide.com> for course schedules, deadlines and registration.

## Changes or Cancellation

Students canceling enrollment or changing class assignments after the registration deadline (nine days prior to scheduled start) will forfeit the deposit and will be charged a 25% fee. Only one change of class assignment is allowed before the registration deadline; penalties will be imposed for additional changes.

If FireTide reschedules a class, students will not be responsible for the deposit forfeiture or fees as described above.



### Intro to FireTide Architecture

- What is a Mesh?
- Overview of FireTide Product Family**
  - Mesh Products
  - Access Point Products
  - Service Delivery Products (CPE)
  - Mobility Products
- Designing a Mesh - Examples**

- Review real-world design examples:
  - Basic mesh
  - Point-to-Point
  - Ad-hoc
  - Protecting a wired connection

### Intro to HotView Pro

- Advantages of HVP
- Architecture of HVP: Client/Server
- Lab: Installing HVP

### Basic Mesh Configuration

- Lab: setting channels SSID, etc

### Understanding Bandwidth in a FireTide Mesh

- Bandwidth Damping & Hidden Node Issue
- Channel Assignment Options

### Checking Performance & Tuning

- Key Parameters to check
- Lab: running iPerf

### Configuring VLANs

- VLAN Applications
- Lab: setting up two VLANs

### Layer 2 vs Layer 3;

- IP Addressing; Multicast**
  - MAC addresses versus IP Addresses
  - ARP, Ping
  - IP Multicast

### Creating a Multicast Group

- Why You Need It
- Lab: Multicast

### Creating a Gateway Group

- What It Is
- Where You Use It
- Lab: GWG
- Review "illegal switch" concept

### Ethernet Direct

- What It Is
- Where You Use It
- Lab: Setting up an Ethernet Bridge

### Mesh Bridge

- Advantages. Where would You use a Mesh Bridge?
- Lab: setting up a Mesh Bridge

### Access Points and VAPs

- VAP: What It Is; Why You'd Use it

- Lab: setup based on VLANs with multiple VAPs

### CPE Service

- What It Is
- Lab: setting policies
- Lab: setting up a CPE

### RF Propagation

- Gain, Path Loss
- Lab: computing expected signal strength in a sample mesh
- Multipath

### Antenna Fundamentals

- Types of Antennas
- Selecting an Antenna for an Application
- Antenna Installation Guidelines

### Site Surveys

- What a Site Survey Is
- Why You Need One
- Equipment Needed
- How to Perform
- Sample Site Surveys

### Student Site Q&A Period

### Wrap-Up

- Examination Evaluation and License Distribution**



For complete information on FireTide partner programs log-on to the FireTide HotFusion partner extranet (<http://partners.firetide.com>).