

Course ID
**RFSAFETY-
EXEC**
Course Duration
1 day

Course Title
**RF Safety for Corporate Management and Environmental
Health Professionals**

**Related
Courses**

- [RF Safety for Wireless Industry \(including Real Estate\) Professionals](#) (3.5 hour web-based public seminar)

Aimed At

Human resource directors, occupational health and safety directors, general counsel's office, engineering and operations management, environmental health and safety professionals, and others who have responsibility for the welfare of personnel who may be at risk of RF exposure.

Group Size

5-25

Prerequisites

None.

**Course
in a Nutshell**

FCC and OSHA have regulations designed to prevent individuals from being exposed to significant levels of radio frequency (RF) energy. Companies need to address the RF safety issue to reduce corporate liability and ensure regulatory compliance. Those who climb cell towers or work near/at or even visit rooftops that host radio equipment are often at risk of being exposed to significant levels of RF energy. This course will help you understand the RF safety issue from the safety, liability, and regulatory perspective. You will learn about the biological effects of RF exposure, FCC regulations, OSHA requirements, workplace hazards, RF hazard protection equipment, safe work practices, and corporate safety planning. This will help you gauge your level of risk and identify measures that can help reduce that risk while ensuring the safety of your employees. The information that you will learn should allow you to develop a simple RF safety program for your organization.

Customize It!

- Are you a manager, engineer, technician, or other professional whose work requires an understanding of the RF safety issue? Please let us know your specific perspective on this issue, so we can tailor the course to your own requirements.
- Get advice and ideas on how to reduce the risk of employee exposure to excessive levels of radiation at your RF facilities. We can review your specific work environments and provide a simple analysis of the magnitude of the risk at various sites.
- If you need to analyze work sites, we can help you understand the differences between computer-based modeling of antenna sites and measurements,

including the advantages and disadvantages of both techniques. We can also help you decide on what equipment is best for your requirements.

Learn How To

- Recognize the biological effects of RF radiation and how they differ from those of the ionizing radiation from X-rays and radioactive materials.
- Identify the potential for exposure to excessive levels of RF energy.
- Minimize your employees' exposure to RF radiation.
- Describe the liability and compliance issues related to RF safety.
- Develop a simple RF safety program.

Course Outline

- Overview of the RF Safety Issue for the Wireless Industry
- Biology
 - Ionizing radiation versus non-ionizing radiation
 - How your body functions as an antenna
 - What parameters are important in determining your exposure
 - Biological effects of excessive exposure to RF energy
- Regulations and Standards
 - FCC regulations
 - OSHA requirements
- Sources of RF energy
- Propagation Characteristics of Antennas
 - Omni-directional wireless antennas
 - Directional or sector wireless antennas
 - Point-to-point microwave antennas
 - FM and TV antennas (some wireless sites are co-located with radio and television broadcast antennas)
- Safe Work Practices
 - Using distance and time averaging while tower climbing and working on rooftops
 - Avoiding eye damage from waveguide leaks
 - Using RF personal monitors effectively
- RF Personal Monitors: Options, Features, Use and Limitations
- Mitigating the RF Exposure Risk
 - The liability issue
 - The regulatory compliance issue
 - Essential elements of an organizational RF safety program
 - Designing a safety program for your organization

- Wrap-up
 - Course recap
 - Discussion of issues specific to your organization

How You Will Learn

- An FCC-recommended RF safety expert will present this course in interactive lecture format.
- Along with the lecture, we will use discussion and exercises to enrich the class and convey the important points. The course can be optionally taught as a hands-on workshop at no added cost.
- If you already know something about the RF technology, we will build on that. If your background is less technical, we will utilize interesting and meaningful examples and analogies to reduce the topic's complexity.
- You will receive a printed copy of the instructor's slide presentation for reference back on your job.

Revised

Aug. 28, 2007