



TOTAL RADIATION SOLUTIONS



## RF EME AWARENESS TRAINING COURSE

This accredited RF EME Awareness Training Course can be completed online or face to face at either your venue or a suitable training facility.

This course has been accredited by the Australian Centre for Radio Frequency Bioeffects Research (ACRBR).

### Course Objectives

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This course is suitable for persons who in the course of and intrinsic to the nature of their work, are exposed under controlled conditions to Radiofrequency Electromagnetic Energy (RF EME). This course aims to ensure that persons who are potentially exposed to RF fields receive appropriate training and instruction in safe work practices and procedures and the controls in place to manage the potential RF hazard.

This course is designed to meet the following regulatory requirements:

1. "RF workers must be trained in safe work practices and supervised when appropriate. They must also be trained about the controls in place to manage the potential RF hazard." This requirement is part of the ARPANSA exposure standard.
2. "...that technical staff of the Carriers who may be involved in activities on or adjacent to Mobile Phone Radiocommunications Infrastructure are trained in radio frequency exposure safety." This requirement is part of the Communications Alliance Ltd C564:2020 Mobile Phone Base Station Deployment and falls under the regulatory jurisdiction of the Radiocommunications Act 1992 and the Telecommunications Act 1997.

### Course Duration

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The face to face course is a one day course.

The online course can be completed in as little as 3 hours, dependant on prior knowledge.



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## Course Outline

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### Topic 1 - Electromagnetic Fields

This unit describes the concept of RF Electromagnetic Energy as a particular band within the broader electromagnetic spectrum. It also describes the relationship of the electric and magnetic fields in the propagation of RF energy and stresses that RF EME is non-ionising radiation.

### Topic 2 - Biological Effects

This unit starts by distinguishing between biological effects and health hazards. It recognises that there is a range of thermal and athermal effects associated with RF EME. For example: body heating, formation of cataracts, ankle currents and RF shocks and/or burns. It also explores the position taken by both the WHO and ARPANSA governing bodies.

### Topic 3 - Exposure Limits

This unit details the history of RF EME protection in Australia, as well as providing details on the mandatory limits on exposure to RF fields for both occupationally exposed staff and members of the general public. It highlights the principle of ALARA (“as low as reasonably achievable”) to minimise known health risks. It sets out the more readily measurable reference levels in a tabular form to ensure that the mandatory basic restrictions in RPS S-1 are not exceeded.

### Topic 4 - Antenna Types

This unit details the more common antenna types with their associated hazard patterns highlighted so that individuals have a better understanding to more effectively manage their work activities when working near transmitting antennas.

### Topic 5 - Personal Alarms

This unit describes the necessary attributes for personal RF Monitors, their limitations and their correct usage to ensure that participants have a thorough understanding of the level of protection provided by these types of devices. All participants are required to be able to demonstrate the correct use of a “Radman” personal protection device.

### Topic 6 - EME Protection and Safety

This unit describes the protection and safety at RF EME transmitting sites that can be achieved by either design or application of suitable administrative processes. These factors are detailed and examples of relevant signage are provided.

### Topic 7 - EME Site Safety Guides

This unit focuses on the minimum requirements for EME Site Safety Guides. Several examples are presented and examined to highlight the benefits these books can bring to the effective management of a RF EME site to ensure the safety of both RF workers and members of the public.



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## **Course Assessment**

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There is an assessment consisting of 20 multiple choice questions at the end of the course requiring a minimum of 80% to successfully complete the course.

## **Course Certification and Accreditation**

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All participants are examined and upon successful completion are issued a certificate.

This course has been externally accredited by the ACRBR.