

Toxicology – what you need to know

Course overview

This is a two-day course for scientists requiring knowledge and understanding of toxicological principles, enabling skilled assessment of toxicological literature and interaction with toxicology specialists. An optional third day is provided for delegates wishing to gain further practical experience of critical analysis of data.

Course description

The course will provide an introduction to the basic concepts of toxicology, including toxicokinetics and target organ toxicity. Application of these principles to health risk assessment under a number of different exposure scenarios associated with industrial chemicals, pesticides, pharmaceuticals and food, will also be explored.

Delegates will be informed of significant practical aspects of toxicology, including regulatory guidelines for toxicity testing of chemicals, and integration of toxicological findings into risk assessment; consideration will be given to ethical issues surrounding these practices.

Guidance on the practice of critical review of toxicological literature will be given. This will be supported by a practical session on the evaluation of selected toxicological literature, with examples of different toxicological aspects. Further experience in critical review is offered to delegates through attendance on the optional third day.

Throughout the course, specific areas of current toxicological concern, such as nanotoxicity and toxicity of mixtures, will be presented and discussed.

Learning objectives

On completion of the two-day course, it is expected that delegates will have:

- An understanding of the principles of toxicology and its application in the risk assessment of chemicals under different exposure scenarios;
- A good understanding of the contribution of toxicokinetics and target organ toxicity to the toxic potential and toxicological action of chemicals;
- An understanding of regulatory guidelines and associated ethical considerations;
- Practical ability to critically appraise toxicological literature, identifying principal findings and weaknesses within published articles;
- A broad appreciation of topics of current toxicological concern;
- Contacts with a range of government and other professionals working in this field;
- An ongoing relationship with IEH Consulting to provide future support