

BASIC PRINCIPLES IN OCCUPATIONAL HYGIENE

- Course description** An introductory course outlining the broad principles of Occupational Hygiene as the basis for anticipation, recognition, evaluation and control of hazards that can be encountered in the workplace
- Course aims** To provide a practical understanding of occupational hygiene for people who need to manage or advise on workplace health issues in their employment.
To provide a foundation for students who wish to undertake more in-depth study in individual occupational hygiene subjects.
To inform and enthuse students about the field of occupational hygiene.
- Learning Outcomes** On successful completion of this module the student should have a basic understanding of:
- The value of occupational hygiene and the role of the occupational hygienist
 - The range of health hazards encountered in the workplace.
 - Hazard recognition techniques
 - Sources and potential routes of occupational exposure
 - Exposure assessment and the measurement processes involved
 - Methods of controlling exposure
 - The management of occupational hygiene programmes
- Course format** 4.5 days taught course with revision/homework questions each evening
xx hour open book exam
- Target Audience** Health and safety professionals
Occupational health specialists (including physicians and nurses).
Specialists in subjects such as acoustics, ergonomics, human factors, occupational psychology, work, organisation, biosafety, acoustics, engineering, or analytical chemistry who want a broader appreciation of how their role interfaces with other professions over health issues in the workplace.

Ref	Area	Description	Time
1	Introduction	Definition of Occupational Hygiene. History and background of the development of Occupational Hygiene. The importance of Occupational Hygiene today.	Day1
2	Human physiology	An introduction to the physiology of the human body and how it can be affected by occupational exposure to chemical and physical agents.	
3	Fundamentals of Toxicology	Basic concepts in toxicology including hazard, dose, routes of entry/absorption, metabolism, toxicity testing. Material Safety Data Sheets as sources of hazard information.	
4	Examples of Hazardous Substances/Processes	Illustration of where common hazardous substance/processes occur and their effects on the body.	

5	Assessment of Health Risks	Basic principles of risk assessments, definitions of hazard and risk with brief mention of expert systems and control banding.	Day 2
6	Measurement of airborne contaminants	An introduction to the measurement of dusts, gases and vapours, including physical states of matter, types of sampling and analytical methods	
7	Hygiene Standards and Occupational Exposure Limits	Overview of the basic concepts including Occupational Exposure Limits, units of measurement, time-weighting, simple calculations/algebra. Standard setting..	
8	Biological monitoring and Health Surveillance	An introduction to the role of Biological Monitoring and Health Surveillance.	
9	General Approaches to the Control of Risk to health	Outline of the main elements within the hierarchy of control.	Day 3
10	Ventilation	Basic principles of General Ventilation and Local Exhaust Ventilation.	
11	Asbestos	Overview of the hazards associated with asbestos and its control in the workplace.	
12	Biological Hazards	Overview of the main biological hazards and their effects on humans.	
13	Noise	Overview of the physics of sound and units of measurement, basic physiology of the ear and the effects of noise.	Day 4
14	Vibration	Overview of the physics of vibration and its health effects on the whole body and locally.	
15	Thermal Environment	Introduction to human responses to the thermal environment and ways to evaluate it.	
16	Lighting and Non Ionizing Radiation	Introduction to the electromagnetic spectrum and the various bands of non-ionizing radiation, focusing on visible light. Effects and assessment of lighting in the workplace.	
17	Ionizing Radiation	Introduction to health effects of ionizing radiation, exposure assessment and control techniques and the specialist roles of those who deal with it.	
18	Introduction to Ergonomics	Introduction to musculoskeletal injuries, ergonomics and the role of the ergonomist.	
19	Display Screen Equipment	Overview of the hazards associated with the use of display Screen Equipment and how they should be managed.	Day 5
20	Human Factors	The importance of human factors and their role in assessment and control of risks. Behaviour and culture.	

21	Stress Management	Introduction to stress and its management in the workplace.
22	Careers in Occupational Hygiene	Overview of qualifications and careers in occupational hygiene.