Draft program (subject to change)

Short course in Public Health Toxicology

The University of Sydney
Norman Gregg Lecture Theatre
School of Public Health

February 22-24th, 2005

Time	Topic	Presenter
Day 1		
Introduction to Toxicology		
9-9.05	Welcome and outline of the course	S Corbett/C Cowie
9.05-9.15	Public Health Toxicology: Scope and Focus	S Corbett
9.15-10.30	Basic concepts in toxicology - Toxicological terms, indices - Classes of Toxicants - Routes of exposure - Interactions: synergism, antagonism etc - Target Organ Toxicity - Types of toxic effects: immediate, delayed, reversible, local/systemic, idiosyncratic - Animal toxicity tests: sub-acute, acute, chronic, mutagenic, carcinogenic etc - Species variation	
10.30-11.00	**MORNING TEA**	
11.00-11.15	Case Study Introduction: An Acute Chemical Incident	
Exposure, Metabolism and Excretion of Toxicants		
11.15-12.00	Exposure and dose - Dose-response relationship - LD50 & LC50, NOAEL & LOAEL - Threshold & non-threshold effects - Margin of safety	-
12.00-12.30	Metabolism & Excretion - Metabolism, excretion - Biotransformation	
12.30-1.30	**LUNCH**	

Time	Topic	Presenter
1.30-2.30	Evaluating Toxicity in Humans - Animal Studies - Chamber Studies - Epidemiological Studies	
2.30- 2.45	Toxicological tales 1	
Finding information for a rapid response		
2.45 –3.45	Sources of information in toxicology: finding it and understanding it	
3.45-4.00	**AFTERNOON TEA**	
4.00-5.00	**Case study group discussion** A Rapid Response to an Acute Chemical Incident What do you need to know? What actions ensue?	

Day 2

Target Organs and Classes of toxicants & their effects

9.00-10.15 Organ Recitals

- Inhalational toxicology
- Reproductive and developmental toxicity
- Neurotoxicity
- Immunotoxicity
- Hepatotoxicity
- Dermal Effects

10.15-10.30 Chronic Toxicity Case Study Introduction

10.30-11.00 MORNING TEA

11.00-11.30 Carcinogenesis, mutagenesis and genetic toxicology

11.30-12.30 Major classes of Toxicants

- Solvents
- Heavy metals
- Pesticides and POPS
- Dusts, Gases and Fumes
- Chemical weapons

12.30-1.30 LUNCH

1.30-2.30 Case study group discussion/presentation
- What information is needed?
- Short and long term public health responses

2.30-2.45 Toxicological Tales II

Toxicology in risk assessment – RA by numbers?

2.45-3.30 The use of toxicology in health risk assessment

3.30-3.50 **AFTERNOON TEA**

3.50-4.50 Exposure Assessment

- Exposure media (food, air, water, soil)
- Affected populations
- Biological Monitoring
- Measuring health outcomes attributable to chemical exposures

4.50-5.00 Debate: Introducing the debate

Day 3

Risk characterisation and regulatory toxicology

9.00-10.00 Doing a risk assessment

- Risk characterisation using toxicological and epidemiological information
- Risk assessment of carcinogens
- Guidelines, reference doses, exposure scenarios

10.00-10.30 Example

10.30-11.00 **MORNING TEA**

11.00-12.00 Regulatory toxicology & standard setting

12.00-12.30 Case study

12.30-1.30 LUNCH

1.30-2.00 When not to do a RA!

2.00-3.00 Communicating risks of environmental exposures

3.00-3.20 **AFTERNOON TEA**

3.20-4.20 The Debate

4.20-4.30 Evaluation

4.30-4.45 Wrap-up & presentation of certificates