

Program: **Certificate in Occupational Health Nursing**

Course: **COHN 5180 – Industrial Hygiene & Toxicology in Occupational Health**

Instructor: **Yvonne Gazzard**

### **Course Description:**

This course provides an overview of toxicology and its application to occupational health and hygiene. It introduces the student to organ system toxicity and diseases associated with occupational exposure. It also provides an introduction to the fundamentals of occupational hygiene and the role of the occupational hygienist in preventing occupational diseases/disorders through the anticipation, recognition, evaluation and control of chemical, physical, biological and musculoskeletal hazards, It focuses on concepts, terminology, and methodology in the practice of occupational hygiene.

### **Course Objectives:**

Upon completion of this on-line course, participants will be able to:

1. Define toxicology and explain the relationship between chemicals, dose, and poison
2. Distinguish between toxicity and hazard
3. Identify toxic agents that are common in the workplace
4. Describe processes that occur within the body when a toxicant is introduced
5. Identify individual variables that influence the susceptibility and degree of response to toxicants
6. Demonstrate the ability to research an occupational disease and determine its cause and the jobs/industry that pose a potential occupational risk.
7. Describe the legal, professional, and ethical framework for the practice of industrial hygiene.

8. Define basic terms and technical concepts integral to the practice of occupational hygiene.
9. Explain the differences between chemical (gases, vapors, particulates, mists, fumes), physical, and biological agents in the workplace.
10. Identify musculoskeletal stressors in the workplace.
11. Identify the basic concepts of workplace exposure assessment.
12. Describe the hierarchy of controls and how it applies to hazard control.
13. Integrate various concepts into an occupational health nursing practice.

### **Course Outline:**

This course is composed of six modules, each having:

- Information prepared by the instructor for you to review
- Required and optional readings that are designated accordingly
- Suggested activities and reflections to support your learning (these are not graded)
- Self-assessments of multiple choice and short-answer questions of varying lengths to help you check your understanding (results are not recorded)

Module 1: Introduction to Toxicology

Module 2: Occupational Diseases/ Disorders

Module 3: Introduction to Occupational Hygiene

Module 4: Recognizing Health Hazards in the Workplace

Module 5: Evaluating and Controlling Health Hazards in the Workplace

Module 6: Occupational Hygiene Management

### **Required Textbook:**

Levy, B., Wegman, D., Baron, S. & Sokas, R. (2011). Occupational and Environmental Health: Recognizing and Preventing Disease and Injury, 6<sup>th</sup> edition. Published by Oxford University Press.

Plog, B., Quinlan, P. Fundamentals of Industrial Hygiene, 6<sup>th</sup> edition. Published by the National Safety Council.

### **Academic Requirements:**

- Two written assignments are worth 25% each.
- One exam worth 50%. (90 minutes time limit)

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