

Program: Diploma in Occupational Health & Safety

Course: DOHS 4291 – Data Driven Decision Making

Instructor: Kari Dunfield

### Course Description:

The degree to which an organization manages occupational health and safety (OHS) has important implications for a wide range of stakeholders. Increasing scrutiny from many of these stakeholders results in a demand for high quality information; information that must be relevant, valid, comparable, and reliable. This course is intended for any individuals who have a stake in the day-to-day management and support of organizational processes, or those who would like to improve their organization's performance through a process orientation and process control. In every aspect of our lives we are both consuming and creating vast amounts of information. However, much of the promise of data-driven approaches within organizations has failed to materialize because managers find it difficult to translate this data into decisive action. The general objective of this course is to fill this gap by providing the student with tools and techniques that can be used to make business decisions with confidence.

### Learning Outcomes:

- Knowledge of the history of data-driven approaches in organizations including Statistical Process Control (SPC), Just in Time (JIT) approaches, Total Quality Management (TQM), Lean, and Six Sigma
- Insight in the tools and techniques that will help students decide what to measure and how to measure it

- In depth information about the difference between populations and samples and between statistics and parameters
- Ability to determine the best equation to represent the relationship between two or more variables and how to use the derived equation for predicting future outcome
- Knowledge on Statistical Process Control and Economic Justification

### **Course Outline:**

Module 1: Why use Data Driven Decision Making?

Module 2: What to Measure and How to Measure

Module 3: Basic Statistics

Module 4: Regression and Correlation

Module 5: Statistical Process Control and Economic Justification

### **Academic Requirements:**

- 1 reflection paper assignment worth 10%
- 1 final assignment (4-8 pages) worth 20%
- 1 cumulative Final Exam worth 70%