CERTIFICATE IN DATA ANALYSIS

Data Analysis is quickly becoming one of the most sought-after skills in the workplace. Companies have vast amounts of data, but it is rare to have someone with the ability to analyze that data to see trends and make predictions. Add a whole new skill set to your portfolio, and make a big difference in the success of your organization by acquiring data analysis skills.

Begin with getting a basic understanding of how to analyze data in a business setting. Then learn how many of your business decisions involve comparing groups for differences. You will know the statistics behind these group differences and relationships. Finally you will find out how to perform inquiries that will be useful to your business or organization, and have the skill necessary to communicate these results through graphs and text that your fellow employees will understand. Whether your business is home based or a large company, this certificate will take you to the next level where important decision making is concerned.

Students need to have Microsoft Excel (not included) to complete this certificate.

This Certificate must be taken in the following order:

- **Introduction to Data Analysis:**

Data Analysis is quickly becoming one of the most sought-after skills in the workplace. Companies have vast amounts of data, but it is rare to have someone with the ability to analyze that data to see trends and make predictions. This course will give you a basic understanding of how to analyze data in a business setting. Businesses look for candidates with an understanding of how to analyze the data they have been collecting; this course will help you start on that journey.

- **Intermediate Data Analysis:**

Many of your business decisions involve comparing groups for differences. For example, would men and women prefer different product features? In addition, you may look at relationships between variables. Does product recognition relate to subsequent product purchase? This Intermediate Data Analysis course will introduce you to the statistics behind these group differences and relationships. In addition, you'll learn how to work with ratings, graphs and user-friendly reports of statistical results.

- **Advanced Data Analysis:**

After taking this Advanced course in Data Analysis, you will be able to perform inquiries that will be useful to your business or organization and have the skill necessary to communicate these results through graphs and text that your fellow employees will understand. Take the guesswork out of important company decisions and make decisions based on the statistically significant information. Whether your business is home-based or a large company, this class will take you to the next level where important decision-making is concerned.

 CEUs/ILUs: 4.8 Length (in hours): 48 Price in CAD $665.00

CERTIFICATE IN DATA ANALYSIS UNITS

Introduction to Data Analysis

Unit 1

Understanding Data

- Identify sources of Data

- Discover methods of Collecting Data

- Examine Quantitative Data

- Examine Qualitative Data

Unit 2

Processing Data

- Introduction to Statistics

- Determine the Appropriate Statistical Method for use in various scenarios

- Identify methods of Sorting and Filtering Data

- Categorize Data

Unit 3

Analyzing Data

- Discuss Probability and the Normal Distribution

- Perform Trend Analysis

- Perform Breakeven Analysis

- Understand basic Statistical Modelling

Unit 4

Interpreting and Presenting Results

- Design Professional-looking Tables

- Generate Effective Charts

- Create Pivot Tables and Pivot Charts

- Compile a Dashboard for Management

Intermediate Data Analysis

Unit 1

Looking for Differences between Groups

- Two separate groups
- Two related groups
- Three or more groups

Unit 2

Looking for Relationships

- Pairs of variables
- Clusters of variables
- Predicting one variable from one or more variables

Unit 3

Looking at Ratings

- Tests of difference using ratings
- Tests of relationship using ratings

Unit 4

Looking at How to Report the Results

- Visual displays
- How to draft the narrative
- How to engage your audience

Advanced Data Analysis

Unit 1

Developing a Survey

- Purposes of surveys
- Fundamentals of Survey Research
- Ethical Considerations

- Likert Scales

Unit 2

Comparing Means

- Chi-Square
- Statistical Significance
- Communicating Results Graphically and Textually
- Practical Problems involving Means Comparisons

Unit 3

Finding Differences between Groups

- ANOVA
- Post Hoc Comparisons
- Communicating Results Graphically and Textually
- Practical Problems Involving ANOVA

Unit 4

Individual Research Inquiries

- Developing Research Questions
- Setting Up Study
- Communicating Results Graphically and Textually