



# *Introduction to Multivariate Data Analysis*

A public course on May 21, 2020 instructed by

*Charles A. Liedtke, Ph.D.*

*Strategic Improvement Systems, LLC*

*Strategy / Quality / Analytics / Improvement / Innovation*

[www.strategicimprovementsystems.com](http://www.strategicimprovementsystems.com)

## Course Details

**Course:** *Introduction to Multivariate Data Analysis*

**Instructor:** Dr. Charles A. Liedtke, Strategic Improvement Systems, LLC

**Location:** Crowne Plaza—Minneapolis West, 3131 Campus Drive, Plymouth, MN 55441

**Date:** May 21, 2020

**Time:** 8:00 a.m. to 4:00 p.m.

**Price:** \$375 **Payment-in-Full** in the Amount of **\$375** is Due By **May 14, 2020**

**Early-Bird Price of \$325** if Payment-in-Full is made by March 20, 2020

**Description:** *Multivariate Data Analysis* consists of a set of **analytical techniques** used to gain unique insights and extract as much knowledge as possible from medium and big-sized “row by column” datasets. Participants will *enhance their analytical skills* and *add to their analytics toolbox* through **practical hands-on exercises** and **drills**. Participants will learn and apply the techniques using a variety of **illustrative datasets** related to service and manufacturing organizations and sports. The successful completion of this course will develop in participants a **base-level mastery** of several *Multivariate Data Analysis* techniques that are useful for **improving organizational performance** and **gaining an analytics advantage**.

**Preparation:** Complete a *Basic Statistics Primer* (sent to registered participants in advance)

**Topics:** Multivariate Data Structures  
Correlation Analysis  
Discriminant Analysis  
Factor Analysis

Types of Data  
Multiple Regression Analysis  
Principal Components Analysis  
Cluster Analysis

**If you have any questions . . .** email Charles at [charles@sisliedtke.com](mailto:charles@sisliedtke.com).



**Strategic Improvement Systems**



### **Course Instructor**

**Charles A. Liedtke, Ph.D.** is the President of Strategic Improvement Systems, LLC, a management consulting company designed to assist leaders in improving the performance of their organization from a strategic perspective. Charles conducts **research, consults**, and provides **customized training** on *Strategy, Quality, Analytics, Improvement, and Innovation*. He has worked with organizations worldwide on strategic improvement initiatives including Fortune 500 companies, privately-held companies, non-profit organizations, and government entities. His most recent research projects were on *Quality, Analytics, and Big Data; Big Data in Hoshin Kanri; Information-Based Customer Value Creation*; and *Advances in Strategic Planning*.

Charles earned a **Ph.D. in Business – Operations and Information Management** from the University of Wisconsin-Madison specializing in strategy; strategic improvement; and quantitative analysis. His Ph.D. dissertation is titled, "Horizontal Interaction During Strategic Improvement Initiatives: A Study Involving Six Quality-Oriented Organizations." Charles has conducted research on Six Sigma, Lean, Process Management, Knowledge Management, Visioning, Hoshin Kanri, Long-Term Planning, Preserving Quality Superiority, Product and Service Design, Discovery, Process Improvement, Analytics, and Big Data. Charles also earned an M.B.A. and a Ph.D. minor in Statistics from UW-Madison; an M.S. degree in Statistics from Iowa State University; and a B.S. degree in Economics from South Dakota State University.

# *Introduction to Multivariate Data Analysis*

## *May 21, 2020*

### **Registration & Payment Information**

#### **To register . . .**

Send an email message with the registration information below to [charles@sisliedtke.com](mailto:charles@sisliedtke.com)

- Name
- Organization, Title / Position
- Email Address
- Payment Preference

#### **To pay . . .**

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**Payment in full** must be received by **May 14, 2020**. There are three ways that you can pay for the course:

1) Mail a check to Charles at the address below with the registration information (above).

Charles A. Liedtke, Ph.D.  
Strategic Improvement Systems, LLC  
6231 Hummingbird Road  
Excelsior, MN 55331

2) Submit a purchase order with the registration information and you will be sent an invoice.

3) Submit the registration information and indicate that you would like to pay by credit card.

Charles will send you an invoice through PayPal.

A person's registration is transferable to another person at any time until the course begins. There will be an 80% refund (\$300 or \$260 for Early-Bird) for a cancellation until May 14, 2020. There are no cancellation refunds after May 14, 2020.

Price of **\$375** per participant includes:

- 6.25 hours of training
- Set of learning materials
- Breakfast, lunch buffet, and break refreshments
- *Introduction to Multivariate Data Analysis* certificate

### **Questions**

You can phone Charles at 952-380-0778 or email him at [charles@sisliedtke.com](mailto:charles@sisliedtke.com).

**Privacy Notice:** Registration information will only be used for internal administrative purposes by Strategic Improvement Systems, LLC and will not be shared with any third party.