

**** Note: the cohort is divided into 2 Groups that will each participate in one 2-hr session per week for 8 weeks. Instructors will duplicate the Monday morning sessions for the Wednesday afternoon cohort:**

Group A will meet on Mondays from 7-9AM

Group B will meet on Wednesdays from 1-3 PM

Week 1 - Monday, April 26, 2021 (7-9 AM) & Wednesday, April 28, 2021 (1-3 PM)

Introduction, Expectations, Data Literacy Concepts (Dunphy/Prengaman)

Frame-up and discussion to define the purpose and value of the training, learning outcomes, what to expect from the course and introduction to data literacy.

Note: If desired, this session could be structured as a collaborative presentation where management would be invited to participate so that they could share an overview of what the company currently does in the area of excel/analytics, etc. and what they hope the participants will gain from the course.

<u>Time (min)</u>	<u>Content</u>
0-15	Introductory remarks, connect with participants with queries, set the stage for successful learning with proper expectation and frame up of program
15-30	Introduction to data literacy and associated vocabulary: data (quantitative and qualitative), accuracy, precision, uncertainty, benchmarking, internal/external data sources. Will be taught with visuals, example exercises, simple applications
30-45	Introduction to mean and standard deviation in statistics. Will introduce concept, do simple exercises and discuss. Instructor will walk participants through 2 exercises to illustrate concepts with participant interaction
45-60	Answer any questions, review key concepts and verify learning with Q & A. This first hour is preparation for the next hour of fundamental Excel use

Introduction to Basic Excel, Basic Statistics and Basic Data Analytics (Dunphy/Prengaman)

Becoming familiar with basic Excel uses, foundational statistical parameters and basics of data analytics

<u>Time (min)</u>	<u>Content</u>
0-15	Opening a sheet, basic layout dynamics, Excel tabs, basic Excel tools, input numbers into columns and/or rows, demonstration of some basic functions. This will be done with ample questions and learning verification.
15-30	Arithmetic with Excel: how to input data and do basic arithmetic (addition, subtraction, multiplication and division) with numbers in cells. This will be done with ample questions and learning verification.

- 30-45 Understanding mean (X) and standard deviation (SD) in statistics. Will introduce concepts, do simple Excel exercises and discuss. Illustrated with Biery Cheese examples. This will be done with ample questions and learning verification.
- 45-60 Introduce the idea of analytics in the context of what has been learned so far in Excel. Answer any questions, review key concepts and verify learning with Q & A.

Week 2 - Monday, May 3, 2021 (7-9 AM) & Wednesday, May 5, 2021 (1-3 PM)

Excel Basics (Pregaman/Dunphy)

Use of Excel to manage data and other information

<u>Time (min)</u>	<u>Content</u>
0-15	Datasets - working with data sets, freezing rows and columns, printing large datasets
15-30	Tables - understanding and creating tables. This will include embedded exercises for participants to practices skills.
30-45	Designing tables and structured references sorting and filtering data
45-60	Sorting, filtering, and manipulating data

Graphs and Charts with Excel (Pregaman/Dunphy)

How to use Excel to clean data sets and create simple charts and graphs for visualization of pertinent data

<u>Time (min)</u>	<u>Content</u>
0-15	Charts - selecting data, choosing chart type, chart presentation
15-30	Pivot Tables - creating and structuring. This will include embedded exercises for participants to practice skills.
30-45	Pivot Tables - working with Pivot Tables, filters and slices
45-60	Pivot Charts - creating and managing. This will include embedded exercises for participants to practice skills.

Week 3 - Monday, May 10, 2021 (7-9 AM) & Wednesday, May 12, 2021 (1-3 PM)

Excel Lab (Pregaman/Dunphy)

The class will be given a small sample data sets and will be led through a series of hands-on exercises in Excel to reinforce skills including simple graphs and charts and statistical concepts.

<u>Time (min)</u>	<u>Content</u>
0-15	Review dataset sources and information; discuss desired outcomes
15-30	Prepare a table of information
30-45	Retrieve and display data from the information table using traditional Excel tools
45-60	Analyze data from the information table using traditional Excel tools
60-75	Report data using tables and charts
75-90	Retrieve and display data from the information table using Pivot Tables
90-105	Analyze and report data from the information table using Pivot Tables and Pivot Charts
105-120	Summarize conclusions and compare Excel data analysis tools

Week 4 Monday, May 17, 2021 (7-9 AM) & Wednesday, May 19, 2021 (1-3 PM)

Basic Data Analytics (Lensman/Quillen)

Introduction to Basic Data Analytics

<u>Time (min)</u>	<u>Content</u>
0-15	Explanation of Data Analytics, objectives, and uses
15-30	Metrics, Key Performance Indicators (KPIs), and example uses. Including discussion of Biery KPI.
30-45	How a data analytics model is developed and used in business.
45-60	Industry examples of Metrics and KPIs. Including breakout sessions and/or discussion and examples within Biery.

Data Analytics Exercises (Lensman/Quillen)

Applications of Basic Data Analytics

<u>Time (min)</u>	<u>Content</u>
0-15	Examine and discuss problem and non-analytics scenario – facilitated group discussion.
15-30	Review data collection, cleaning, and data structures

30-45	Data analysis exercise including breakout sessions and/or discussion
45-60	Conclusion and discussion of key points from the exercise

Week 5 - Monday, May 24, 2021 (7-9 AM) & Wednesday, May 26, 2021 (1-3 PM)

Data Analytics and Lean Manufacturing (Ayoub/Barr)

Instructors will introduce the concept of Lean Manufacturing, its connection to Data Analytics and principles and applications used to manage a manufacturing production line

<u>Time (min)</u>	<u>Content</u>
0-15	Introduction to key concepts of Lean Manufacturing
15-30	Data and DMAIC – introduction and facilitated discussion
30-45	Determining CTQ's – introduction and facilitate discussion
45-60	- Exercise – if we reflect on current environment what would Biery measure. This will include breakout sessions followed by group discussions
60-75	Sampling – introduction and facilitated discussion
75-90	Pareto Analysis – introduction and facilitated discussion
90-105	Visualizing analytics – introduction and facilitated discussion
105-120	- Exercise - Biery data set doing Pareto Analysis and Visualizing. This will include breakout sessions followed by group discussions

Week 6 - Monday, May 31, 2021 (7-9 AM) & Wednesday, June 2, 2021 (1-3 PM)

Case Study Review and Discussion (Ayoub/Lensman)

Participants will examine the application exercise for Lean Manufacturing and apply skills learned to current manufacturing processes

<u>Time (min)</u>	<u>Content</u>
0-15	Case studies of Lean in Manufacturing – examples in the industry with group discussion
15-30	Frame up of a case – General case within the industry to foster new ideas
30-45	- Exercise – Breakout sessions to discuss in small groups
45-60	Group discussion and analysis of the case

Data Governance and Data Security (Quillen/Barr)

Introduction to the basic of data security and maintaining data integrity

<u>Time (min)</u>	<u>Content</u>
0-15	What is Data Security. How exposed are we?
15-30	What Data Does Biery have? Where is it Stored? Break out Session
30-45	Where are we vulnerable? Facilitated discussion of the results of breakout.
45-60	What can we do to make things more secure? Facilitated discussion.

Week 7 - Monday, June 7, 2021 (7-9 AM) & Wednesday, June 9, 2021 (1-3 PM)

Using Data to Manage a Manufacturing Production Line – Case Study and Q&A (Ayoub/Ayoub)

Instructors will present relevant case studies, discuss the practical application and transferability of analytics principals to the manufacturing industry and how the techniques learned can translate to the management of a production line.

<u>Time (min)</u>	<u>Content</u>
0-15	Building blocks of the line, what happens before and after? We will discuss viability from other aspects of the line by taking concepts learned and applying to the production line from raw materials to finished product
15-30	Go over cases – introduce general case studies to the industry
30-45	Frame up a case – Present problem to be reviewed in breakout sessions
45-60	Exercise – discuss solution collectively

Biery Cheese Case Study (Ayoub-Lensman/Ayoub-Lensman)

If desired, the company will provide the instructors with a real data set(s). Instructors will lead the participants through an analysis of the data set by applying principles learned in the program.

<u>Time (min)</u>	<u>Content</u>
0-15	Review the data provided by Biery
15-30	Story board the pain point to be addressed with facilitated discussion
30-45	Brainstorm ideas of resolutions in breakout sessions

45-60 Share findings and ideas in facilitated large group discussion

Week 8 - Monday, June 14, 2021 (7-9 AM) & Wednesday, June 16, 2021 (1-3 PM)

Communicating Analytics (Dunphy/Quillen)

How to verbally and visually communicate about data.

<u>Time (min)</u>	<u>Content</u>
0-15	Opening interactive exercises using Biery Cheese visualized data. How to describe results from analytics to another person. Analytics vocabulary, simplifying what you mean and gaining insight from results of data analytics. Simple exercises relevant to Biery
15-30	The Four simple steps used in the two exercises and how to use these steps every time you communicate: Show visual, Highlight potential insight, Discuss evidence, Propose action(s)
30-45	Do two more examples with Biery results: one simple, one more complex. Apply the Show, Highlight, Discuss and Propose approach. Let participants work the process and do the exercises
45-60	Answer any questions, review key concepts and verify learning with Q & A.

Facilitated Discussion and Wrap Up (All/All)

Participants will be involved in an interactive discussion with the panel of instructors to review what has been learned in the program and to answer any remaining questions. Management is invited to participate in this discussion, if desired.

<u>Time (min)</u>	<u>Content</u>
0-15	Facilitated discussions with open-ended questions posed to review and refresh. Use polling questions to verify understanding on what has been learned. Let the participants ask questions
15-30	Discuss with participants their key take-aways. Clarify issues and answer all questions.
30-45	Continue with take-aways and suggest post-program activities to apply what they have learned.
45-60	One last review of key points and final assessments/surveys.