

MORS CERTIFICATE PROGRAM

Certificate in Advanced Excel Functions for Data Analysts

Every worker must do some basic analysis, make presentations, and submit reports. Many organizations do not have the “fancy” software packages to create documents that instructional designers may have. However, most organizations have the Microsoft Office Suite.

In the past 10-15 years, Microsoft has updated the capabilities in their Office Suite, especially in Excel. This course is a follow-on to the Certificate in Excel Functions for Data Analysts I course and is designed to present the **additional** capabilities to conduct analyses.

The students will need laptops with the Microsoft Office Suite and two monitors are recommended (one for the slides and one for the Excel work). During the first three and one-half days of the class, the instructor will present an overview of a topic and then work through how to do techniques as a class. At the end of the day, some optional homework will be assigned. All of the information from the first 3 ½ days will be included in a 5-hour Capstone Project during Thursday afternoon and Friday morning.

All times EDT (East Coast), starts at 10 AM to allow West Coast participation (7 AM PDT start time).

Monday-Tuesday-Wednesday-Thursday-Friday, 7 – 11 October 2024

MONDAY – DATA: 2 sessions, 2 hours each, 1 break in the middle of the session

1000-1015 Instructor & Student Introductions

1015-1245 **MODULE 1: Getting the Data Ready** (15-min break in the middle)

- Understanding the Data (the 4 Types of Data)
- Importing & Cleaning Data (Introduction to Power Query)
- Getting the Data Ready (Manipulating & Transposing Data)

1245-1345 Lunch (1 hour)

1345-1630 **MODULE 2: Working with the Data** (15-min break in the middle)

- Date, Time, and Text functions
- Checking the Data (Information and Error Checking Functions)
- Organizing the Data (More Sorting and Filtering)

1630-1730 In-Class Homework

- Instructor assigns in class homework for modules 1-2
- Instructor answers questions in class on homework for modules 1-2
- Handout and go over Practice Capstone Project

1730-1800 Wrap-up – Questions from Day 1

TUESDAY – ANALYSIS: 2 sessions, 2 hours each, 1 break in the middle of the session

1000-1020 Day 1 Review

- Questions from Day 1,
- Questions on Homework for Modules 1-2,
- Preview of Day 2

1020-1240 **MODULE 3: Additional Charts** (15-min break in the middle)

- Analysis Charts – Funnel, Waterfall, Tornado, Radar / Spider, Surface Plot, & Tree Map
- PM Charts in Excel – Organization, Gant, and “S” Curve
- In-cell Charts and Sparklines
- Chart Templates

1240-1340 Lunch (1 hour)

1340-1630 **MODULE 4: Additional Data Query** (15-min break in the middle)

- Logic and Logical Math (MAXIFS, MINIFS, IFS, COUNTIFS, SUMIFS, AVERAGEIFS)
- Lookup (MATCH, INDEX, COUNTBLANK, FORMULATEXT, UNIQUE, XLOOKUP)
- Pivot Tables (External Data Sources, Consolidating Data Sources, Grouping, Report Layouts, Calculated fields, Slicers, PivotCharts)

1630-1730 In-Class Homework

- Instructor assigns in class homework for modules 3-4
- Instructor answers questions in class on homework for modules 3-4

1730-1800 Wrap-up

- Questions from Day 2

WEDNESDAY – VISUALIZATION: 2 sessions, 2 hours each, 1 break in the middle of the session

1000-1030 Day 2 Review

- Questions from Day 1-2,
- Questions on Homework for Modules 1-4,
- Preview of Day 3

1030-1300 **MODULE 5: Power BI Creating Reports** (15-min break in the middle)

- Introduction
- Getting Data
- Creating Reports

1300-1400 Lunch (1 hour)

1400-1630 **MODULE 6: Power BI Creating Dashboards** (15-min break in the middle)

- Modifying & Printing Reports
- Creating Dashboards

1630-1700 Wrap-up – Questions from Day 3

THURSDAY – Additional Analysis and Start Capstone Project

1000-1030 Review of Days 1-3

- Questions from Days 1-3,
- Questions on Homework from Modules 1-6,
- Preview of Day 4

1030-1300 **MODULE 7: Miscellaneous** (15-min break in the middle)

- Probability (new, not in 1st course)
- Creating Templates & Forms
- “What If” Analysis – Data Tables, Scenarios & the Scenario Manager
- Excel Dashboards

1300-1400 Lunch (1 hour)

1400-1430 Preview Capstone Project

1430-1700 **MODULE 8: Start Capstone Project Part 1**

- Part 1
 - Data Manipulation, Project Management, and Preliminary Analysis
- Data sets will be available on the Google Drive where the rest of the files were posted before starting the course along with questions to work through a project that is based on the material that was taught the first three days. The files should be available no later than 1400.
- The 5-hour working time includes time includes this afternoon and tomorrow morning.
- Can review the Homework Problems and Review during the Capstone time.
- Instructor will be available for questions during the working time via email (kirk.michealson@gmail.com) and cell phone (407-375-3440).

FRIDAY – Complete Capstone Project and Wrap-up

1000-1030 Any Capstone Project Questions?

1030-1300 **MODULE 8: Continue Capstone Project Part 2**

- Part 2
 - Reviewing Summary Data, Additional Analysis, and “What If” Analysis; plus conclusions and recommendations
- The 5-hour working time completes this morning.
- Can review the Homework Problems and Review during the Capstone time.
- Instructor will be available for questions during the working time via email (kirk.michealson@gmail.com) and cell phone (407-375-3440).
- No later than 1300, send the instructor (Kirk Michealson, kirk.michealson@gmail.com) your Excel and PowerPoint files. The instructor will review and provide individual feedback after the end of the course.

1300-1400 Lunch (1 hour)

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Certificate in Advanced Excel Functions for Data Analysts – 7 September 2024

1400-1530 Capstone Project review

- Go over the Capstone Project as a class

1530-1630 Course Wrap-up