## COURSE BREAKDOWN

Instruction: 30%
Practical Application: 30%
Presentations: 15%
Feedback and Discussion: 15%
Office Hours: 10%

## PREREQUISITES

You must be able to interpret, clean and analyze data using spreadsheets before attending the course. You will complete assignments using your preferred program(s), so we recommend familiarity with at least one of the following: PowerBI, Python, R, SQL, Tableau, and/or related tools and software.

# Business-Driven Data Analysis

## COURSE DESCRIPTION

*Business-Driven Data Analysis* teaches a proven, repeatable approach that analysts can leverage across data projects and toolsets to deliver timely analysis with actionable insights and strong return on investment. Attendees will learn how to define, prepare, refine, analyze and present complex data analyses for diverse business stakeholders that provide actionable insights. They will master the Pragmatic Data Analysis Model by completing five case studies, derived from representative business problems, and a unique final project showcasing these skills with data from their own organizations.

PRAGMATIC
INSTITUTE

## COURSE OBJECTIVES

MAIN OBJECTIVE: Translate a business problem into data analysis that provides actionable insights.

### Define the ideal problem statement.

- Ask questions that arrive at the crux of the problem

- Disambiguate terms and translate vague or figurative requests into objective, measurable goals

- Distinguish the actual problem from assumptions, misconceptions and jargon that may be embedded into the initial request

- Articulate the desired outcome and its context

- Identify potential data sources and establish the timeline to collect information

### Quantify the project requirements by defining measurements, thresholds and data quality.

- Create clear research questions and hypotheses that can be tested with evidence

- Generate consensus on thresholds

- Establish minimum data requirements for both quality and quantity

- Identify key factors that can be influenced

- Articulate measures of value

### Evaluate the available data sources and tools. Determine whether available data is sufficient or needs to be augmented.

- Select the most useful data format—time series, ratings, categorizations—to answer your research question

- Choose the most effective tools and technologies to gather and wrangle data

- Identify available proxy variables to provide additional insight

- Validate the representativeness of your samples

### Select the most effective methods to analyze the data for insights.

- Choose methods that match your research questions and data format

- Identify the strengths and limitations of each analytical method

- Focus on methods that are most likely to lead to actionable insights with measurable ROI

- Beware of defaulting to "fashionable" methods and avoid bandwagon thinking

- Choose a method to aggregate results, if using more than one analytical method

### Communicate findings effectively with diverse stakeholders.

- Articulate the problem being solved clearly and concisely

- Share only the most essential information stakeholders require

- Frame the findings and their implications with an engaging narrative

- Visualize information in a way that leads to immediate understanding

- Clearly outline the potential return on investment for the proposed solution

PRAGMATIC INSTITUTE

## COURSE TOOLS AND TEMPLATES

- Pragmatic Data Analysis Model
- AdventureWorks Outline and Data Schema
- AdventureWorks Database

- Access Guide
- Communication Styles Guide
- Define Guide
- Preparation Guide

- Refinement Guide
- Analysis Guide
- Visualization Guide
- Return on Investment Guide

## COURSE MODULES

**01 Thinking Through the Data Analysis Process**
Learn a proven, repeatable approach that analysts can leverage across data projects and toolsets to deliver timely, business-driven analysis with actionable insights and strong return on investment.

**02 Presenting Actionable Insights to Stakeholders**
Create visualizations and presentations that focus on actionable insights and clearly communicate the expected return on investment for recommendations.

**03 Defining Problems and Possibilities**
Focus on the specific business problem you want to solve with data and ensure alignment with the expectations of stakeholders.

**04 Preparing for Analysis**
Streamline the ways you explore the available data and identify the most useful methods that connect your analytical strategy to business insights.

**05 Refining Problems and Possibilities**
Ensure that your project is on the right course by revisiting questions and expectations with stakeholders as challenges arise in the analysis and implementation.

**06 Analyzing with Purpose**
Maximize impact by focusing models on controllable factors that can bring about the desired outcome.

**07 Developing Professional Networks and Skillsets**
Improve the way you learn and collaborate in the data analysis space by harnessing the power of networks and community relationships.

**08 Excelling Throughout the Data Analysis Process**
Put what you've learned into practice by applying the Pragmatic Data Analysis Model to a business problem at your own organization to identify key strategies.

## COURSE EVALUATION

Upon successful completion of the course, attendees will have moved from knowledge of data analysis to expertise in communicating and executing business-focused data analysis projects for diverse stakeholders. Attendees are required to participate in group discussion and in-class analysis. They must successfully complete five data analysis assignments, which involve performing advanced data analysis and presenting their insights and recommendations for managers, executives or clients to better address important business issues. Attendees must also execute a final project—applying real-world data to solve a practical business problem at their own organizations—to the satisfaction of the instructor.

PRAGMATIC INSTITUTE