Module 1 - Predictive Analytics Concepts

- What and Why of Predictive Analytics
  - Predictive Analytics Defined
  - Business Value of Predictive Analytics

- The Foundation for Predictive Analytics
  - Statistical Foundation
  - Data Mining Foundation
  - Machine Learning Foundation
  - Data Science Foundation
  - Describing Data Science
  - The Changing Landscape of Data Sources

- Predictive Analytics in BI Programs
  - Predictive Analytics in the BI Stack
  - Predictive Analytics in the BI Roadmap
  - Business, Technical, and Data Dependencies

- Becoming Analytics Driven
  - Business Driven
  - Grass Roots Driven

- Common Applications for Predictive Analytics
  - What Business Needs to Predict

- The Language of Predictive Analytics
  - Making Sense of the Terminology

Module 2 - Models and Statistics

- Predictive Models
  - What Are Models?
  - Using Models
  - Categories of Models
  - Model Development
  - Contributing Communities

- Descriptive Statistics
  - Variables
  - Frequencies and Summaries
  - Distribution and Skew
  - Relationships
  - Dependent and Independent Variables

- Inferential Statistics
  - Modeling the Population

- Probability
  - Estimating Likelihood
  - Calculating Probability
  - Calculating Odds
  - Logit Transformation
  - Probability Distribution Models
  - Probability Distribution Examples
Module 3 - Regression Model Examples
- Regression Models
  - Overview
- Linear Regression Models
  - Overview
  - Example Business Case
  - Example Model
- Logistic Regression Models
  - Overview
  - Example Business Case
  - Steps for Creating the Model
  - Example Model
  - Predictors and Classifiers
  - Classifier Example

Module 4 - Building Predictive Models
- Model Building Processes
  - Data Mining Projects
  - CRISP-DM
  - SEMMA
  - CRISP-DM and SEMMA Compared
- Implementation and Operations Teams
  - A Team Effort
  - Roles and Responsibilities
- Predictive Techniques
  - Probability Values
  - Classification and Clustering
  - Segmentation
  - Association
  - Sequencing
  - Forecasting
- Technology
  - Features and Functions Overview
  - The Tools Landscape
- Model Building Algorithms
  - What and Why
  - Some Examples

Module 5 - Implementing Predictive Capabilities
- Introductory Concepts
  - Distribution View
  - Model Types View
  - Process View
  - Process Overview
- Business Understanding
Activities and Deliverables
Pragmatics

Data Understanding
Activities and Deliverables
Pragmatics

Data Preparation
Activities and Deliverables
Pragmatics

Modeling
Activities and Deliverables
Pragmatics

Evaluation
Activities and Deliverables
Pragmatics

Deployment
Activities and Deliverables
Pragmatics

Module 6 - Human Factors in Predictive Analytics

Analytics Culture
Executive Buy-In
Strategic Positioning
Enterprise Range and Reach
Decision Processes

People and Predictive Analytics
The Team
The Range of People
The Range of Knowledge
Readiness
Trust and Motivation
Expectations and Intent
Getting from Analytics to Impact

Ethics and Predictive Analytics
Why Ethics Matters
Data and Ethics

Module 7 - Getting Started with Predictive Analytics

Predictive Analytics Readiness
Readiness Checklist
Executive Commitment
Organizational Buy-In
Data Assets
Human Assets
Technology Assets

Predictive Analytics Roadmap
A Plan to Evolve
An Evolving Plan