uCertify

Course Outline

Foundation of Data Analytics

18 May 2024

1. Course Objective
2. Pre-Assessment
3. Exercises, Quizzes, Flashcards & Glossary

   Number of Questions
4. Expert Instructor-Led Training
5. ADA Compliant & JAWS Compatible Platform
6. State of the Art Educator Tools
7. Award Winning Learning Platform (LMS)
8. Chapter & Lessons

   Syllabus

   Chapter 1: The Value of Data

   Chapter 2: Working with Data

   Chapter 3: Data Typologies and Governance

   Chapter 4: Business Statistics

   Chapter 5: Optimization and Forecasting

   Chapter 6: Other Data Analytic Tools

   Chapter 7: Data Visualization

   Videos and How To
9. Practice Test

   Here's what you get

   Features
10. Live labs

    Lab Tasks

    Here's what you get
11. Post-Assessment

1. Course Objective

Enhance your data analytics skills with a Data Analytics foundation course and lab. The course and lab offer interactive learning resources that help candidates learn how to use data typologies, data analytics tools, business statistics, data visualization with the working and value of data, and many more. The course also covers the subject areas like processing, collecting, storing, and analyzing to help you in advancing your professional career. The course will help you in advancing your professional career.

2. Pre-Assessment

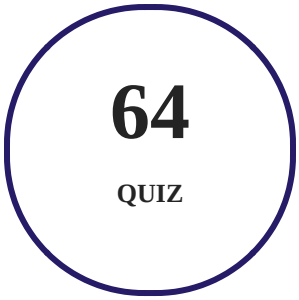
Pre-Assessment lets you identify the areas for improvement before you start your prep. It determines what students know about a topic before it is taught and identifies areas for improvement with question assessment before beginning the course.

3. Exercises

There is no limit to the number of times learners can attempt these. Exercises come with detailed remediation, which ensures that learners are confident on the topic before proceeding.

4. Quiz

Quizzes test your knowledge on the topics of the exam when you go through the course material. There is no limit to the number of times you can attempt it.



5. flashcards

Flashcards are effective memory-aiding tools that help you learn complex topics easily. The flashcard will help you in memorizing definitions, terminologies, key concepts, and more. There is no limit to the number of times learners can attempt these. Flashcards help master the key concepts.

6. Glossary of terms

uCertify provides detailed explanations of concepts relevant to the course through Glossary. It contains a list of frequently used terminologies along with its detailed explanation. Glossary defines the key terms.

7. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

8. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

9. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

10. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been

recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
    1. Best Postsecondary Learning Solution

- **2015**
    1. Best Education Solution
    2. Best Virtual Learning Solution
    3. Best Student Assessment Solution
    4. Best Postsecondary Learning Solution
    5. Best Career and Workforce Readiness Solution
    6. Best Instructional Solution in Other Curriculum Areas
    7. Best Corporate Learning/Workforce Development Solution

- **2016**
    1. Best Virtual Learning Solution
    2. Best Education Cloud-based Solution
    3. Best College and Career Readiness Solution
    4. Best Corporate / Workforce Learning Solution
    5. Best Postsecondary Learning Content Solution
    6. Best Postsecondary LMS or Learning Platform
    7. Best Learning Relationship Management Solution

- **2017**
    1. Best Overall Education Solution
    2. Best Student Assessment Solution
    3. Best Corporate/Workforce Learning Solution
    4. Best Higher Education LMS or Learning Platform

- **2018**
    1. Best Higher Education LMS or Learning Platform

2. Best Instructional Solution in Other Curriculum Areas
3. Best Learning Relationship Management Solution

- **2019**
  1. Best Virtual Learning Solution
  2. Best Content Authoring Development or Curation Solution
  3. Best Higher Education Learning Management Solution (LMS)

- **2020**
  1. Best College and Career Readiness Solution
  2. Best Cross-Curricular Solution
  3. Best Virtual Learning Solution

11. Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

Syllabus

Chapter 1: The Value of Data

- Opening Case
- Introduction
- Managers and Decision Making

- The Business Analytics Process
- Business Analytics Tools
- Business Analytics Models: Descriptive Analytics, Predictive Analytics, and Prescriptive Analytics
- Summary
- Discussion Questions
- Closing Case 1
- Closing Case 2

Chapter 2: Working with Data

- Some Sample Data
- Moving Quickly with the Control Button
- Copying Formulas and Data Quickly
- Formatting Cells
- Paste Special Values
- Inserting Charts
- Locating the Find and Replace Menus
- Formulas for Locating and Pulling Values

- Using VLOOKUP to Merge Data
- Filtering and Sorting
- Using PivotTables
- Using Array Formulas
- Solving Stuff with Solver
- OpenSolver: I Wish We Didn't Need This, but We Do

Chapter 3: Data Typologies and Governance

- Opening Case
- Introduction
- Managing Data
- The Database Approach
- Big Data
- Data Warehouses and Data Marts
- Knowledge Management
- Summary
- Discussion Questions
- Problem-Solving Activities

- Closing Case 1
- Closing Case 2

Chapter 4: Business Statistics

- Introduction to Probability
- Structure of Probability
- Marginal, Union, Joint, and Conditional Probabilities
- Addition Laws
- Multiplication Laws
- Conditional Probability
- Revision of Probabilities: Bayes' Rule
- Introduction to Hypothesis Testing
- Testing Hypotheses About a Population Mean Using the z Statistic (? Known)
- Testing Hypotheses About a Population Mean Using the t Statistic (? Unknown)
- Testing Hypotheses About a Proportion
- Testing Hypotheses About a Variance
- Solving for Type II Errors
- Summary

- Formulas
- Supplementary Problems
- Analyzing the Databases
- Case - Colgate-Palmolive Makes a “Total” Effort

Chapter 5: Optimization and Forecasting

- Why Should Data Scientists Know Optimization?
- Starting with a Simple Trade-Off
- Fresh from the Grove to Your Glass…with a Pit Stop through a Blending Model
- Modeling Risk
- Wait, What? You're Pregnant?
- Don't Kid Yourself
- Predicting Pregnant Customers at RetailMart Using Linear Regression
- Predicting Pregnant Customers at RetailMart Using Logistic Regression
- For More Information
- Correlation
- Introduction to Simple Regression Analysis
- Determining the Equation of the Regression Line

- Residual Analysis
- Standard Error of the Estimate
- Coefficient of Determination
- Hypothesis Tests for the Slope of the Regression Model and Testing the Overall Model
- Estimation
- Using Regression to Develop a Forecasting Trend Line
- Interpreting the Output
- Summary
- Formulas
- Supplementary Problems
- Analyzing the Databases
- Case - Caterpillar, Inc.

Chapter 6: Other Data Analytic Tools

- Getting Up and Running with R
- Doing Some Actual Data Science

Chapter 7: Data Visualization

- Why Do We Visualize Data?

- How Do We Visualize Data?
- Color
- Common Chart Types
- When Our Visual Processing System Betrays Us
- Every Decision Is a Compromise
- Summary

12. Practice Test

Here's what you get

51	53
PRE-ASSESSMENTS QUESTIONS	POST-ASSESSMENTS QUESTIONS

Features

Each question comes with detailed remediation explaining not only why an answer option is correct but also why it is incorrect.

Unlimited Practice

Each test can be taken unlimited number of times until the learner feels they are prepared. Learner can review the test and read detailed remediation. Detailed test history is also available.

Each test set comes with learn, test and review modes. In learn mode, learners will attempt a question and will get immediate feedback and complete remediation as they move on to the next question. In test mode, learners can take a timed test simulating the actual exam conditions. In review mode, learners can read through one item at a time without attempting it.

13. Live Labs

The benefits of live-labs are:

- Exam based practical tasks
- Real equipment, absolutely no simulations
- Access to the latest industry technologies
- Available anytime, anywhere on any device
- Break and Reset functionality
- No hardware costs

Lab Tasks

The Value of Data

- Summarizing the Aspects of Business Analytics and its Applications

Working with Data

- Freezing the Top Row
- Using the AVERAGE Function
- Using Relative, Absolute, and Mixed References
- Formatting Numbers

- Applying Conditional Formatting
- Using the Paste Special Feature
- Analyzing Data Using a Line Chart
- Creating a PivotTable Automatically
- Calculating the Minimum and Maximum Sales Value
- Using the SUM Function
- Using the MATCH Function
- Using the VLOOKUP Function
- Sorting Data

Data Typologies and Governance

- Understanding Big Data
- Understanding the Relational Database Model

Business Statistics

- Understanding Business Statistics
- Calculating the Statistics

Optimization and Forecasting

- Using the SUMIF Function
- Using the IF Function

Other Data Analytic Tools

- Using the factor() Function
- Using the str() Function
- Using the sqrt() Function
- Using the matrix() Function
- Using the length() Function
- Using the rbind() and cbind() Functions
- Using the aggregate() Function
- Using the order() Function
- Using the predict() Function

- Using the print() Function
- Using the summary() Function
- Using the which() Function

Data Visualization

- Visualizing Data
- Understanding Data Visualization
- Creating and Analyzing Chart Types

Here's what you get

35	29	38
LIVE LABS	VIDEO TUTORIALS	MINUTES

14. Post-Assessment

After completion of the uCertify course Post-Assessments are given to students and often used in conjunction with a Pre-Assessment to measure their achievement and the effectiveness of the exam.

GET IN TOUCH:

3187 Independence Drive
Livermore, CA 94551,
United States

+1-415-763-6300

support@ucertify.com

www.ucertify.com