

# uCertify

## Course Outline

### Advanced Data Visualization



25 Apr 2024

1. Course Objective
2. Exercises, Quizzes, Flashcards & Glossary  
Number of Questions
3. Expert Instructor-Led Training
4. ADA Compliant & JAWS Compatible Platform
5. State of the Art Educator Tools
6. Award Winning Learning Platform (LMS)
7. Chapter & Lessons

Syllabus

Chapter 1: Getting Started

Chapter 2: Telling Stories with Data

Chapter 3: Handling Data

Chapter 4: Choosing Tools to Visualize Data

Chapter 5: Visualizing Patterns over Time

Chapter 6: Visualizing Proportions

Chapter 7: Visualizing Relationships

Chapter 8: Spotting Differences

Chapter 9: Visualizing Spatial Relationships

Chapter 10: Designing with a Purpose

Chapter 11: Appendix

Chapter 12: Tutorials

Videos and How To

8. Live labs

Lab Tasks

Here's what you get

## 1. Course Objective

Gain hands-on expertise in data visualization by Advanced Data Visualization course and performance-based labs. Performance-based labs simulate real-world, hardware, software & command line interface environments and can be mapped to any text-book, course & training. Data visualization is a graphical representation of complex data for two purposes i.e., sense-making (data analysis) and communication. It is important because it identifies areas that needs improvement; clarifies factors that influence customer behavior; and predicts sales volume.

## 2. 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.

**130**  
EXERCISES

## 3. Quizzes

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.

**4**  
QUIZZES

## 4. 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.

## 5. 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.

## 6. 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.

## 7. 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

## 8. 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: Getting Started

Chapter 2: Telling Stories with Data

- 1.0 Competency One and Objectives

- Video: The Art of Data Visualization
- More Than Numbers
- What to Look For
- Design
- Wrapping Up

### Chapter 3: Handling Data

- 2.0 Competency Two and Objectives
- Gather Data
- Formatting Data
- Wrapping Up

### Chapter 4: Choosing Tools to Visualize Data

- Out-of-the-Box Visualization
- Programming
- Illustration
- Mapping
- Survey Your Options
- Wrapping Up

## Chapter 5: Visualizing Patterns over Time

- 4.0 Competency Three and Objectives
- What to Look for over Time
- Discrete Points in Time
- Continuous Data
- Wrapping Up

## Chapter 6: Visualizing Proportions

- What to Look for in Proportions
- Parts of a Whole
- Proportions over Time
- Wrapping Up

## Chapter 7: Visualizing Relationships

- 6.0 Competency Four and Objectives
- What Relationships to Look For
- Correlation
- Distribution



- Comparison
- Wrapping Up

## Chapter 8: Spotting Differences

- What to Look For
- Comparing across Multiple Variables
- Reducing Dimensions
- Searching for Outliers
- Wrapping Up

## Chapter 9: Visualizing Spatial Relationships

- What to Look For
- Specific Locations
- Regions
- Over Space and Time
- Wrapping Up

## Chapter 10: Designing with a Purpose

- 9.0 Competency Five and Objectives

- Prepare Yourself
- Prepare Your Readers
- Visual Cues
- Good Visualization
- Wrapping Up

Chapter 11: Appendix

Chapter 12: Tutorials

## 9. 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

## Handling Data

- Scrape, format and present your data
- Clean and Format Data using Excel
- Changing Formats using Python

## Here's what you get

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LIVE LABS

GET IN TOUCH:

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