uCertify

Course Outline

Even You Can Learn Statistics and Analytics

18 May 2024

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5. ADA Compliant & JAWS Compatible Platform
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Here's what you get

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1. Course Objective

Learn the basic concepts of statistics and analysis with the Even You Can Learn Statistics and Analytics course and lab. This will provide you with the knowledge to apply statistics and analytics in your life and you will have the opportunity to learn and practice the most commonly used statistical methods while using Microsoft Excel. Every concept is explained in plain English, without the use of higher mathematics or mathematical symbols. The course uses a Concept-Interpretation approach to help you learn statistics and analytics. This course will provide you a complete package with hands-on experience in applying statistics and analytics.

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: Introduction

- Mathematics Is Always Optional!
- Learning with the Concept-Interpretation Approach

Chapter 2: Fundamentals of Statistics

- The First Three Words of Statistics
- The Fourth and Fifth Words
- The Branches of Statistics
- Sources of Data
- Sampling Concepts
- Sample Selection Methods
- One-Minute Summary
- References

Chapter 3: Presenting Data in Tables and Charts

- Presenting Categorical Variables
- Presenting Numerical Variables
- “Bad” Charts
- One-Minute Summary
- References

Chapter 4: Descriptive Statistics

- Measures of Central Tendency
- Measures of Position
- Measures of Variation
- Shape of Distributions
- Important Equations
- One-Minute Summary
- References

Chapter 5: Probability

- Events
- More Definitions
- Some Rules of Probability
- Assigning Probabilities
- One-Minute Summary
- References

Chapter 6: Probability Distributions

- Probability Distributions for Discrete Variables
- The Binomial and Poisson Probability Distributions

- Continuous Probability Distributions and the Normal Distribution
- The Normal Probability Plot
- Important Equations
- One-Minute Summary
- References

Chapter 7: Sampling Distributions and Confidence Intervals

- Foundational Concepts
- Sampling Error and Confidence Intervals
- Confidence Interval Estimate for the Mean Using the t Distribution (? Unknown)
- Confidence Interval Estimation for Categorical Variables
- Confidence Interval Estimation When Normality Cannot Be Assumed
- Important Equations
- One-Minute Summary
- References

Chapter 8: Fundamentals of Hypothesis Testing

- The Null and Alternative Hypotheses

- Hypothesis Testing Issues
- Decision-Making Risks
- Performing Hypothesis Testing
- Types of Hypothesis Tests
- One-Minute Summary
- References

Chapter 9: Hypothesis Testing: Z and t Tests

- Test for the Difference Between Two Proportions
- Test for the Difference Between the Means of Two Independent Groups
- The Paired t Test
- Important Equations
- One-Minute Summary
- References

Chapter 10: Hypothesis Testing: Chi-Square Tests and the One-Way Analysis of Variance (ANOVA)

- Chi-Square Test for Two-Way Tables
- One-Way Analysis of Variance (ANOVA): Testing fo...ferences Among the Means of More Than Two Groups

- Important Equations
- One-Minute Summary
- References

Chapter 11: Simple Linear Regression

- Basics of Regression Analysis
- Developing a Simple Linear Regression Model
- Measures of Variation
- Inferences About the Slope
- Common Mistakes When Using Regression Analysis
- Important Equations
- One-Minute Summary
- References

Chapter 12: Multiple Regression

- The Multiple Regression Model
- Coefficient of Multiple Determination
- The Overall F Test

- Residual Analysis for the Multiple Regression Model
- Inferences Concerning the Population Regression Coefficients
- One-Minute Summary
- References

Chapter 13: Introduction to Analytics

- Basic Concepts
- Descriptive Analytics
- Typical Descriptive Analytics Visualizations
- One-Minute Summary
- References

Chapter 14: Predictive Analytics

- Predictive Analytics Methods
- More About Predictive Models
- Tree Induction
- Clustering
- Association Analysis
- One-Minute Summary

- References

Chapter 15: Appendix A: Microsoft Excel Operation and Configuration

- Conventions for Keystroke and Mouse Operations
- Microsoft Excel Technical Configuration

Chapter 16: Appendix B: Review of Arithmetic and Algebra

- Symbols

Chapter 17: Appendix C: Statistical Tables

Chapter 18: Appendix D: Spreadsheet Tips

- Chart Tips
- Function Tips

Chapter 19: Appendix E: Advanced Techniques

- Advanced How-To Tips
- Analysis ToolPak Tips

12. Practice Test

Here's what you get

39	2	39
PRE-ASSESSMENTS QUESTIONS	FULL LENGTH TESTS	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

Presenting Data in Tables and Charts

- Creating a Bar Chart
- Creating a Pie Chart
- Creating a Pivot Table
- Modifying and Refreshing the Pivot Table
- Creating a Bar Chart
- Creating a Line Chart
- Creating a Scatter Plot

Descriptive Statistics

- Calculating Mean
- Calculating Median and Mode
- Calculating First Quartile

Probability

- Working with Probability

Probability Distributions

- Calculating the Value of a Normal Random Variable
- Using the Poisson Distribution
- Computing Binomial Probabilities

Sampling Distributions and Confidence Intervals

- Calculating the Confidence Interval

Hypothesis Testing: Z and t Tests

- Analyzing the Hypothesis Test for the Pooled-Variance t-Test

Hypothesis Testing: Chi-Square Tests and the One-Way Analysis of Variance (ANOVA)

- Analyzing the Hypothesis Test for the Chi-Square Test

Simple Linear Regression

- Creating a Histogram

Multiple Regression

- Using Multiple Regression

Introduction to Analytics

- Creating a Sparkline

Here's what you get

20	13	16
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.

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