uCertify

Course Outline

Epidemiology

20 May 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: Introduction

   Chapter 2: Entering the World of Epidemiology

   Chapter 3: Epidemiology 101 — Understanding the Basics

   Chapter 4: Exploring the Development of Epidemiological Thinking

   Chapter 5: Eyeing the Milestones in Public Health

   Chapter 6: Recognizing Diseases and Controlling Them

   Chapter 7: Tackling the Epidemiologic Triangle

   Chapter 8: Inspecting Descriptive Epidemiology: Person, Place, and Time

   Chapter 9: Viewing Disease Patterns

   Chapter 10: Linking Demography and Disease

   Chapter 11: Digging into Math: Calculating Rates and Risks

   Chapter 12: Focusing on the Levels of Prevention

   Chapter 13: Preventing Disease with Vaccine

   Chapter 14: Recognizing Methods of Disease Surveillance

   Chapter 15: Investigating an Outbreak

   Chapter 16: Identifying Disease by Screening

   Chapter 17: Figuring Out Whether an Association Is Causal

   Chapter 18: Investigating the Types of Epidemiologic Studies

   Chapter 19: Encountering Bias and Confounding

1. Course Objective

The Epidemiology course is designed for individuals interested in understanding the spread and impact of diseases on populations. This course typically covers the study of the distribution and determinants of health-related states or events in specified populations and the application of this study to the control of health problems. Whether you're a healthcare professional, researcher, or a curious mind seeking knowledge, this course offers a comprehensive exploration of epidemiology. Engage in thought-provoking lectures by seasoned epidemiologists, learn about real-world case studies, current research trends, and practical applications of epidemiological principles through this course.

2. 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.

3. 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.

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: Introduction

- About This Course
- Icons Used in This Course
- Where to Go from Here

Chapter 2: Entering the World of Epidemiology

- Introducing Epidemiology
- Recognizing How Numbers Can Help Study Disease
- Focusing on Prevention Rather Than a Cure
- Delving into Study Finding
- Figuring Out What You Know about Epidemiology: Some Q&As

Chapter 3: Epidemiology 101 — Understanding the Basics

- Defining Epidemiology — What to Expect from Your Coursework and Beyond
- Realizing Why Epidemiology Is Important
- Understanding How Epidemiology Tools Are Applied
- Contrasting the Roles of a Physician and Epidemiologist

- Seeking Medications
- Considering How a Disease Is Transmitted
- Searching for Sources of Epidemiologic Data

Chapter 4: Exploring the Development of Epidemiological Thinking

- Meeting Hippocrates — the First Epidemiologist
- Tackling the Miasma Theory
- Examining Contributions to Medicine and Public Health – Thomas Sydenham
- Using Concepts of Environmental Epidemiology — Noah Webster
- The Germ Theory — Washing Hands Is Essential
- Working on Workers' Diseases — Bernardino Ramazzini
- The Birth of Vital Statistics: No Labor Pains Involved
- Examining the Start of Epidemiology and Public Health in the United States
- Reforming Public Health in England
- Looking At Modern Epidemiology

Chapter 5: Eyeing the Milestones in Public Health

- Finding the Treatment of Scurvy — James Lind
- Discovering Sources of Cholera in London's Golden Square — John Snow

- Uncovering Causes of Pellagra — Joseph Goldberger
- Describing the 1918 Influenza Pandemic
- Eradicating Smallpox
- Finding Smoking as a Cause of Lung Cancer
- Feeling the Beat of the Framingham Heart Study

Chapter 6: Recognizing Diseases and Controlling Them

- Identifying the Modes of Transmission
- Eyeing the Chain of Infection: Can You Break It?
- Examining the Natural History of Disease
- Listing Common Notifiable Diseases
- Controlling Waterborne Diseases
- Tackling Problems of Airborne Infections
- Curving Vector-Borne Diseases
- Limiting Parasitic Infections
- Controlling Sexually Transmitted Infections
- Dealing With Emerging Infectious Diseases
- Identifying Diseases Caused by Heavy Metals

Chapter 7: Tackling the Epidemiologic Triangle

- Scrutinizing an Acute Disease Model
- Inspecting a Chronic Disease Model
- Understanding How Climate Change Can Affect Health

Chapter 8: Inspecting Descriptive Epidemiology: Person, Place, and Time

- Knowing Person Factors
- Focusing on Place Factors
- Checking Time Factors

Chapter 9: Viewing Disease Patterns

- Defining the Epidemiologic Transition
- Grasping Why Epidemiologic Transition Happens
- Studying Some Chronic Health Conditions
- Understanding How Epidemiologic Transition Affects Healthcare

Chapter 10: Linking Demography and Disease

- Defining Demography — Why It’s Important
- Using Demographic Data to Identify Population at Risk
- Tackling Population Pyramids: Not the Ones in Egypt

- Projecting Population – Simple Math

Chapter 11: Digging into Math: Calculating Rates and Risks

- Addressing Some Basics When Calculating Descriptive Epidemiology
- Calculating Crude Morbidity and Crude Mortality Rates
- Figuring Out Commonly Used Rates
- Measuring Incidence and Prevalence
- Standardizing Rates

Chapter 12: Focusing on the Levels of Prevention

- Identifying Primary Prevention
- Recognizing Secondary Prevention
- Examining Tertiary Prevention

Chapter 13: Preventing Disease with Vaccine

- Getting the Lowdown on Immunity
- Planning Shots for Children, from Birth through Adolescence
- Looking Closer at Cancer-Preventing Vaccines
- Identifying Common Vaccine-Preventable Diseases
- Preventing Disease for World Travelers

Chapter 14: Recognizing Methods of Disease Surveillance

- Differentiating between Survey, Surveillance, and Monitoring
- Defining the Types of Surveillance
- Conducting Surveillance: The How-to

Chapter 15: Investigating an Outbreak

- Conducting an Epidemic Investigation
- Digging Out Cases by Surveillance, Step-by-Step
- Using Makeshift Hospitals
- Walking through an Outbreak Investigation

Chapter 16: Identifying Disease by Screening

- Defining Screening
- Naming Ingredients of a Good Screening Test
- Looking Closer at Some Common Screening Programs
- Evaluating Screening Tests

Chapter 17: Figuring Out Whether an Association Is Causal

- Establishing Causality

- Understanding Hill’s Criteria for Causality
- Making Rothman’s Causal Pie

Chapter 18: Investigating the Types of Epidemiologic Studies

- Looking At the Anatomy of Epidemiologic Studies
- Conducting a Cross-Sectional Study
- Plotting a Case-Control Study
- Leading a Cohort Study
- Figuring Out an Ecological Study
- Developing a Questionnaire

Chapter 19: Encountering Bias and Confounding

- Defining Bias
- Clarifying What Confounding Means
- Reviewing Bias-Affecting Research Findings
- Steering Clear of Bias in the Initial Stages of Research
- Controlling for Confounders

Chapter 20: Focusing On Ethics in Health Research

- Comprehending the Evolution of Ethical Norms in Research
- Grasping the Importance of a Code of Ethics
- Using Informed Consent

Chapter 21: Ten Careers with a Degree in Epidemiology

- Epidemiologist
- Environmental Epidemiologist
- Surveillance Data Analyst and Epidemiologist
- Infection Control Officer
- Research Scientist
- Research Associate
- Data Analyst
- Program Manager
- Chief Medical/Quality Officer
- Data and Research Coordinator

Chapter 22: Ten Tips for Acing Your Epidemiology Classes

- Ask and Answer Questions in Class
- Practice, Practice, and Practice

- Take Good Class Notes
- Get Information Online
- Apply the Knowledge
- Make a Cheat Sheet
- Use a Scientific Calculator
- Memorize Some Definitions and Steps
- Get Involved in Research
- Participate in Group Work

GET IN TOUCH:

3187 Independence Drive
Livermore, CA 94551,
United States

+1-415-763-6300

support@ucertify.com

www.ucertify.com