

“This program was exactly what I needed to advance my healthcare quality expertise, and I look forward to using all of my new skills.”

—Kristin Seidl, Ph.D., RN, clinical data scientist, University of Maryland Medical Center, and assistant professor, University of Maryland School of Nursing

## HEALTHCARE ANALYTICS

### About Our Program

Our online *Healthcare Analytics Certificate Program* is a career-oriented program designed for working clinicians and IT professionals. You’ll learn to select, prepare, analyze, interpret, evaluate and present data related to health system performance and clinical effectiveness.

- **World-Class Education**—Our curriculum was developed by experts across several health systems, including UC Davis
- **Experienced Instructors**—Learn from industry-leading instructors who have significant experience in healthcare analytics
- **Immediate ROI**—Gain practical, career-based skills you can use immediately
- **Networking Opportunities**—Engage with professional peers and faculty for a dynamic learning experience
- **Demonstrated Proficiency**—A certificate indicates serious dedication to a particular field and provides a competitive edge in hiring and promotion situations

### CONTACT US

**CALL** (530) 757-8899

**EMAIL** [healthinfo@ucdavis.edu](mailto:healthinfo@ucdavis.edu)

**WEB** [cpe.ucdavis.edu/healthanalytics](http://cpe.ucdavis.edu/healthanalytics)

Learn more about the *Healthcare Analytics Certificate Program*, including student testimonials and instructor bios, online.



# Your Academic Path

## Introduction to Healthcare Analytics

3.0 quarter academic credits, X426.5

Explore the value proposition for clinical intelligence and the role of analytics in supporting a data-driven learning healthcare system. Consider the attributes of high-performing health systems, how quality and performance are measured (NQF, HEDIS, AHRQ), and infrastructure requirements to effectively leverage data for health improvement.

## Healthcare Data Acquisition and Management

3.0 quarter academic credits, X423.2

Learn to navigate complex data structures and efficiently retrieve the data needed to answer a question or solve a problem. Explore the types and sources of healthcare data; common representations of data (ICD, CPT); healthcare data models; data harmonization; strategies for optimizing data quality; ethics, data ownership and privacy; and new models of data organization and analytics.

## Applied Healthcare Statistics

3.0 quarter academic credits, X423.3

Examine epidemiological concepts in health outcomes research and their use in evaluating the patterns, causes and effects of health in patient populations. Topics include study design; generalized linear models; internal and external validity; and methods to minimize bias, adjusting for confounding and measuring effect modification. Participants will learn to develop a testable hypothesis, build and refine analytic models and interpret results relevant to health outcomes.

## Data Mining for Healthcare Analytics

3.0 quarter academic credits, X423.5

The proliferation of data in the post-EHR era creates opportunities for large-scale data analysis to discover meaningful patterns and trends. Explore the application of data mining techniques for purposes of big data analytics using administrative and clinical systems data. Topics include an overview of the data mining process, data mining standards and output protocols, and common techniques used in mining healthcare data.

## Quantitative Methods and Decision Analysis

3.0 quarter academic credits, X423.4

Examine an array of quantitative methods used by health analytics practitioners to evaluate questions of efficiency and effectiveness in health care. This advanced course integrates and builds on prior coursework in statistics and data mining and provides additional exposure to advanced methodologies, such as event sequencing, analytical groupers, simulation and predictive modeling.



### LEARN WHEN AND WHERE YOU WANT!

Experience high-quality, convenient online learning in an engaging, interactive format. Move through weekly lessons as a cohort while retaining the option to log on at the time and place of your choosing.

### STUDENTS SAY

“Healthcare analytics is a growing field, and the smarter we are in using the information, the better we can help control costs and improve the quality of health care.”

–William Lance Rodgers

### COST

**\$6,000 (or \$1,200 per course)**

There is a one-time, nonrefundable registration fee of \$125. Cost of textbooks not included.