PROFESSIONAL PROGRAM IN
Data Analysis

Gain the skills to collect, process, analyze and interpret data to create actionable insights. Learn how to leverage machine learning, statistics, data mining and big data to develop new strategies in marketing, retail, health care, finance and other fields. Those new to data analysis should begin with Introduction to Data Sciences and Analytics COMPSCI X407.9.

4–6 Required Courses, 8 Semester Units, 120 Hours of Instruction

**Data Analysis**
- Hands-On Machine Learning With Spark
  COMPSCI X459.5 (2 semester units)
- Introduction to Data Sciences and Analytics
  COMPSCI X407.9 (2 semester units)
- Introduction to MATLAB and SCILAB
  EL ENG X446.7 (1 semester unit)
- Introduction to Statistical Analysis With SPSS
  STAT X400 (2 semester units)
- Practical Machine Learning (With R)
  COMPSCI X460 (2 semester units)
- Programming With R
  EL ENG X480.1 (2 semester units)
- Python for Data Analysis and Scientific Computing
  COMPSCI X433.3 (2 semester units)

**SAS Analytics**
- Introduction to the SAS System
  STAT X405 (2 semester units)
- Data Analysis Using the SAS System
  STAT X446 (2 semester units)
- Predictive Analytics Using the SAS System
  STAT X446.1 (2 semester units)

**Data Management**
- Business Intelligence With SQL Server
  EL ENG X404.8 (2 semester units)
- Concepts of Relational Database Management Systems
  COMPSCI X408 (3 semester units)
- Data Modeling and Database Design
  EL ENG X402.5 (2 semester units)
- Introduction to Big Data Concepts, Technologies and Deployment
  COMPSCI X408.1 (2 semester units)
- Introduction to Relational Database Management Systems
  COMPSCI X409.1 (2 semester units)
- Managing Data(bases) Using SQL
  EL ENG X401.9 (2 semester units)
- Quantitative Analysis:
  Data Mining Using SQL
  COMPSCI X407.1 (1 semester unit)

Course availability is subject to change.

Learn more at extension.berkeley.edu/spos/data-analysis.html
Prerequisites for Admission

There are no formal prerequisites for the Professional Program in Data Analysis, but it is strongly recommended that you have college-level mathematics, understand statistics and possess basic computer skills.

Curriculum and Completion Requirements

The curriculum comprises 4–6 required courses for a total of 8 semester units (120 hours of instruction). Candidates must pay a nonrefundable specialized program of study registration fee.

You must take all courses for a letter grade. To receive the Award of Completion, you must maintain an overall minimum 2.0 grade point average (GPA), with a grade of C or better (no C-minus grades) in each course.

All coursework must be completed within three years of registering for the program. However, requirements may be updated based on new developments in the field; we recommend completing the curriculum in a timely fashion.

How to Register for This Specialized Program of Study

Register for the Professional Program in Data Analysis at extension.berkeley.edu/cert/register.html. Click on the More Information button next to the program title to begin the registration process. Complete your student account profile if you are a new student, and pay the nonrefundable program registration fee. You may enroll in individual courses without registering for the Professional Program in Data Analysis.

Value of a UC Berkeley Extension Specialized Program of Study

As the continuing education arm of the University of California, Berkeley, UC Berkeley Extension is a respected provider of adult and professional education. Fulfilling the requirements for a UC Berkeley Extension specialized program of study reflects the successful completion of a high-caliber, in-depth sequence of courses.

Learn More

For additional information about the Professional Program in Data Analysis, visit extension.berkeley.edu/spos/data-analysis.html, email extension-techeng@berkeley.edu or call (510) 642-4151.