UC Berkeley's Master of Information and Data Science — Delivered Online

PROGRAM OVERVIEW

A Master of Information and Data Science

Designed for data science professionals, the UC Berkeley School of Information's (I School) Master of Information and Data Science (MIDS) program prepares students to derive insights from real-world data sets, use the latest tools and analytical methods, and interpret and communicate their findings in ways that influence decision-making in their organizations.

Delivered on an interactive online platform and designed by UC Berkeley I School faculty, the MIDS program brings the unique UC Berkeley student experience to students — no matter where they live.

MIDS Curriculum

Through a hands-on, project-based approach, the MIDS program features a rigorous, multidisciplinary curriculum that prepares students to form valuable data queries by defining (and refining) business or research questions that are relevant and tractable in order to use data to inform decision-making.

Students learn to apply the latest statistical and computational methods for identifying patterns, extracting insights, and making predictions from complex data sets. The curriculum also provides students with the opportunity to hone their skills in effectively communicating findings ofdata analysis and dealing with the ethical dilemmas and legal requirements associated with working with real-world data at scale.

The MIDS curriculum focuses on the following key areas:

- Research design
- Data engineering
- Machine learning
- Mining and exploring
- Data visualization
- Ethics and privacy
- Statistical visualization
- Communicating results

CURRICULUM OVERVIEW

The MIDS program is 27 units, which can be completed over three to five terms. All students are required to take two courses in their first term. As a part of the curriculum, you will also attend an immersion experience on the UC Berkeley campus.

Students who are proficient in object-oriented programming will complete 12 units of foundation course work, 12 units of advanced course work, and the synthetic capstone course.

Students who are not proficient in object-oriented programming will be required to complete the Python for Data Science foundation course as part of their 15 units of foundation course work, 9 units of advanced course work, and the synthetic capstone course.

Foundation Courses (12-15 units)

Introduction to Data Science Programming*
Research Design and Application for Data and Analysis
Statistics for Data Science
Fundamentals of Data Engineering
Applied Machine Learning

Advanced Courses (9 units) – choose 3

Experiments and Causal Inference
Behind the Data: Humans and Values
Deep Learning in the Cloud and at the Edge
Statistical Methods for Discrete Response, Time Series, and Panel Data
Machine Learning at Scale
Natural Language Processing with Deep Learning
Data Visualization

Capstone Course (3 units)

Synthetic Capstone Course

*Required course for students who are not proficient in object-oriented programming.

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datascience@berkeley

STUDENT EXPERIENCE

Seamlessly Delivering the UC Berkeley Student Experience Online

- **A robust online learning experience.** Delivered using a web-based platform and featuring self-paced, online course work and live, collaborative seminars driven by problem-solving and discussions, the datascience@berkeley online classroom creates a rich learning experience with no back row.

- **An on-campus immersion.** Crafted to deliver additional learning, networking, and community-building opportunities, this three- to four-day program at UC Berkeley offers you the chance to meet faculty and classmates, attend lectures and workshops, and participate in networking events with industry leaders.

- **Face-to-face interaction.** The online platform facilitates collaboration and leads to real connections among students, faculty, and peers.

- **Dedicated student support.** Fully integrated into the I School community, you will receive academic, technical, and career services support.

- **Connections in the San Francisco Bay area.** San Francisco is the epicenter of the data revolution. As a UC Berkeley student, you will build valuable connections through an extensive global network.

> According to IBM, the projected demand for data scientists will increase 28% by 2020.

ADMISSIONS OVERVIEW

We welcome applications to our program in the fall, spring, and summer. Admissions requirements include, but are not limited to, those listed below. For a comprehensive list of requirements, please visit datascience.berkeley.edu

- A high level of quantitative ability as demonstrated by work experience that demonstrates your quantitative abilities, and/or academic coursework that demonstrates quantitative aptitude

- A high level of analytical reasoning ability and a problem-solving mindset as demonstrated in academic and/or professional performance

- A working knowledge of fundamental concepts including: data structures, algorithms and analysis of algorithms, and linear algebra

- The ability to communicate effectively as demonstrated by academic performance, professional experience, and/or strong essays that demonstrate effective communication skills

- Programming proficiency as demonstrated by prior work experience or advanced course work (e.g., Python or Java)

Applications are evaluated holistically on a combination of combination of prior academic performance, work experience, essays, letters of recommendation, and goals that are a good fit for the program. The UC Berkeley School of Information seeks students with the academic abilities to meet the demands of a rigorous graduate program.

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