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Information

School of Information (<u>http://</u> www.ischool.berkeley.edu) Office: 102 South Hall, (510) 642-1464

Dean: AnnaLee Saxenian, PhD School Website: School of Information (<u>http://</u> www.ischool.berkeley.edu)

Overview

The School of Information (I School) was created in 1994 to address one of society's most compelling challenges: the need to organize and make sense of the abundance of information that we can now collect, store, and share without regard for cost or distance. The way we organize, represent, govern, and make sense of this information will shape our ability to achieve public as well as private goals.

The I School educates professionals and scholars to understand the problems and possibilities of information, to develop models of information practice, and to design useful and usable information applications, services, and solutions. This requires insights from diverse fields. Our faculty includes scholars and professionals with deep expertise in information and computer science, social sciences, management, law, design, and policy, as well as related fields.

We offer two professional master's degrees and an academic doctoral degree. The Master of Information Management and Systems (MIMS) degree trains students for careers as information professionals and emphasizes small classes and project-based learning. The Master of Information and Data Science (MIDS) degree is an online program training data science professionals. The PhD program equips scholars to contribute to knowledge and to the policies that influence the organization, use, and sharing of information.

Master of Information Management and Systems

The Master of Information Management and Systems (MIMS) program is a two-year full time program, designed to train students in the skills needed to succeed as information professionals. Such professionals must be familiar with the theory and practice of storing, organizing, retrieving and analyzing information in a variety of settings in business, the public sector, and the academic world. Technical expertise alone is not sufficient for success; I School graduates will be expected to perform and manage a multiplicity of information related tasks.

Graduates of the MIMS program will be able to:

- Identify and address user and stakeholder information and resource needs in context.
- · Make and assess information design decisions iteratively.
- Intentionally organize collections of information and other resources to support human and/or machine-based interactions and services.
- Understand and apply foundational principles and debates of information law, policy, and ethics.
- Analyze complex relationships and practical choices at the intersection of technical design, policy frameworks, and ethics.
- Understand and apply fundamental principles and debates of information economics.

- Understand and apply architectural, computational, and algorithmic thinking and principles of concurrency to the design of information systems.
- Scope, plan and manage open-ended projects, both individually and in teams.
- Present findings and conclusions persuasively.

Such a profession is inherently interdisciplinary, requiring aspects of computer science, cognitive science, psychology and sociology, economics, business, law, library/information studies, and communications.

For information regarding degree requirements, please see the School of Information website (<u>http://www.ischool.berkeley.edu/programs/mims/</u> <u>degreerequirements</u>) .

Master of Information and Data Science

The Master of Information and Data Science (MIDS) program is a parttime, fully online program that trains data-savvy professionals and managers. The MIDS program is designed to train leaders in the growing field of data science.

The program focuses on problem solving, preparing students to creatively apply methods of data collection, analysis, and presentation to solve the world's most challenging problems. Students will bring together a range of methods to define a research question; to gather, store, retrieve, and analyze data; to interpret results; and to convey findings effectively. Using the latest tools and practices, students will identify patterns in and gain insights from complex data sets.

Working with data at scale requires distinctive new skills and tools. The MIDS program is distinguished by its disciplinary breadth; unlike other programs that focus on advanced mathematics and modeling alone, the MIDS degree provides students insights from social science and policy research, as well as statistics, computer science and engineering.

For information regarding degree requirements, please see the program's website (<u>http://datascience.berkeley.edu/academics/curriculum</u>).

PhD Program

The doctoral program is a research-oriented program in which the student chooses specific fields of specialization, prepares sufficiently in the literature and the research of those fields to pass a qualifying examination, and completes original research culminating in the written dissertation. The degree of Doctor of Philosophy is conferred in recognition of a candidate's grasp of a broad field of learning and distinguished accomplishment in that field through contribution of an original piece of research revealing high critical ability and powers of imagination and synthesis.

For information regarding degree requirements, please see School of Information website (<u>http://www.ischool.berkeley.edu/programs/phd/</u> degreerequirements).

INFO W10 Introduction to Information 3 Units

Department: Information Course level: Undergraduate Term course may be offered: Spring Grading: Letter grade.

Hours and format: 2 hours of Web-based lecture and 1 hour of Webbased discussion per week for 15 weeks. This is an online course. This lower-division survey course will provide an introduction to the study of information, an interdisciplinary science that draws on aspects of computer science, sociology, economics, business, law, library studies, cognitive science, psychology, and communication. The course is organized into modules that may cover topics such as social bookmarking, networks and web security, human-computer interaction, interface design, technology and poverty, law and policy, business models and entrepreneurship.

Instructor: Carver

INFO 90 Programming for Computing Applications 3 Units

Department: Information

Course level: Undergraduate

Term course may be offered: Fall

Grading: Offered for pass/not pass grade only.

Hours and format: 3 hours of Lecture per week for 15 weeks. **Prerequisites:** Restricted to Information Management and Systems students only.

An introduction to high-level computer programming languages covering their basis in mathematics and logic. This course will guide students through the elements that compose any programming language including expressions, control of flow, data structures, and modularity via functions and/or objects. Covers traditional contemporary programming paradigms including sequential, event-based, and object-oriented programming; multi-person programming projects and debugging strategies.

INFO 98 Directed Group Study for Lower Division Undergraduates 1 - 4 Units

Department: Information

Course level: Undergraduate

Terms course may be offered: Fall and spring

Grading: Offered for pass/not pass grade only.

Hours and format: 1 to 4 hour of Directed group study per week for 15 weeks.

Lectures and small group discussions focusing on topics of interest, varying from semester to semester.

Course may be repeated for credit. Course may be repeated for credit when topic changes.

INFO C103/COG SCI C103/HISTORY C192/MEDIAST C104C History of Information 3 Units

Department: Information Management and Systems; Cognitive Science; History; Media Studies

Course level: Undergraduate

Terms course may be offered: Fall, spring and summer

Grading: Letter grade.

Hours and format: 3 hours of Lecture per week for 15 weeks. 7.5 hours of Lecture per week for 6 weeks.

Prerequisites: Upper level undergraduates.

This course explores the history of information and associated technologies, uncovering why we think of ours as "the information age." We will select moments in the evolution of production, recording, and storage from the earliest writing systems to the world of Short Message Service (SMS) and blogs. In every instance, we'll be concerned with both what and when and how and why, and we will keep returning to the question of technological determinism: how do technological developments affect society and vice versa? Formerly known as Information Systems and Management C103. Instructors: Duguid, Nunberg