

# Networked Systems, M.S.

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The graduate program in Networked Systems is administered by faculty from two academic units: the Department of Computer Science (CS) in the Donald Bren School of Information and Computer Sciences and the Department of Electrical Engineering and Computer Science (EECS) in The Henry Samueli School of Engineering. The program offers an M.S. and a Ph.D. in Networked Systems.

The Networked Systems program provides education and research opportunities to graduate students in the areas of computer and telecommunication networks. Networked Systems include telephone, cable TV networks, wireless, mobile, ad hoc, and cellular phone networks, as well as the Internet. Networked Systems, as a field, is inherently interdisciplinary since it combines technology in software, hardware, and communications. As a result, it transcends traditional departmental boundaries. Networked Systems draws primarily from Computer Science, Computer Engineering, and Electrical Engineering. At UCI, these areas are housed in two departments: CS and EECS. The Networked Systems program unites the respective strengths of these two departments and provides integrated M.S. and Ph.D. programs in this area.

Program requirements include core, breadth, and concentration courses. **Core courses** are taken by all Networked Systems students and form a foundation for networking topics. **Breadth courses** may be selected from technical courses (including distributed systems, algorithms, data structures, operating systems, databases, random processes, and linear systems) and management and applications of technology (including educational technology, management of information technology, and social impact). **Concentration courses** may be selected from a long list including courses on networks, performance, middleware, communications, and operations research. Core, breadth, and concentration course lists are available on the Networked Systems website (<http://www.networkedsystems.uci.edu/>) or from the Networked Systems Program Office.

Prospective graduate students apply directly to the Networked Systems program, specifying if they are pursuing an M.S. or a Ph.D. Applicants who do not hold a bachelor's degree in Computer Science, Computer Engineering, or Electrical Engineering may be required to take supplementary course work to obtain and demonstrate sufficient background in the field.

Applicants are evaluated on the basis of prior academic record and potential for creative research and teaching, as demonstrated in their application materials including official university transcripts, letters of recommendation, and statement of purpose.

Students pursuing the M.S. may choose either Plan I (Thesis Plan) or Plan II (Comprehensive Examination Plan).

## Requirements

Students following Plan I must complete the three core courses, two courses chosen from the breadth course list with at most one chosen from the Management and Applications of Technology list, three courses chosen from the concentration course lists with at least one course chosen from at least two different concentrations, two additional courses chosen with the approval of the advisor, and a thesis. In addition, students pursuing Plan I must enroll in two courses of thesis-related research: COMPSCI 298 or EECS 296.

Students following Plan II must complete the three core courses, three courses chosen from the breadth course list with at most two chosen from the Management and Applications of Technology list, four courses chosen from the concentration course lists with at least one course chosen from at least three different concentrations, and two additional courses chosen with the approval of the advisor. Students pursuing this option must also pass a comprehensive examination which will be administered through NET SYS 295 and will consist of a term paper on a topic relevant to the student's educational program and that term's speakers.