Statistics, M.S.

Research in statistics can range from mathematical studies of the theoretical underpinnings of a statistical model or method to the development of novel statistical models and methods and a thorough study of their properties. Frequently, statistics research is motivated and informed by collaborations with experts in a particular substantive field. Their scientific studies and data collection efforts may yield complex data that cannot be adequately handled using standard statistical methodology. Statisticians aim to develop methods that address the scientific or policy questions of the researcher. In doing so, statisticians must consider how efficiently and effectively the proposed methodology can be implemented and what guarantees can be provided as to the performance of the proposed methods. Such questions can often be answered using a combination of mathematical, analytical, and computational techniques.

Background: Individuals from a variety of backgrounds can make significant contributions to the field of statistics as long as they have sufficient background in statistics, mathematics, and computing. Undergraduate preparation in statistics, mathematics, and computing should include multivariate calculus (the equivalent of UCI courses MATH 2A-MATH 2B, MATH 2D-MATH 2E), linear algebra (MATH 121A), elementary analysis (MATH 140A-MATH 140B), introductory probability and statistics (STATS 120A-STATS 120B-STATS 120C), and basic computing (I&C SCI 31). For students with undergraduate majors outside of mathematics and statistics, it is possible to make up one or two missing courses during the first year in the program.

Students who are currently enrolled in a doctoral program at UCI and wish to pursue an M.S. in Statistics at the same time may apply for admission to the M.S. in Statistics program.

Admission to the M.S. in Statistics for current Ph.D. students in other departments will only be offered to students who are currently enrolled in a doctoral program at UCI and in a school that has a signed and approved Memorandum of Understanding agreement with the Department of Statistics.

Applicants are required to enroll in STATS 200A and/or STATS 210 during the fall quarter, and STATS 200B and/or STATS 211 or STATS 210B during the winter quarter. Before the end of the fifth week of the winter quarter of their first year, interested students are required to submit an application to the M.S. in Statistics. The application includes:

1. A copy of the original application to the student's home department's Ph.D. program, including transcripts, GRE scores, and letters of recommendation.
2. A letter from the home department's graduate director recommending the student for the M.S. in Statistics.

The application should be sent to the home school's Office of Graduate Affairs and then forwarded to the Department of Statistics. The Department of Statistics will then review the application to determine admission status.

For additional information about the Bren School of ICS's graduate programs and admissions information, click here (https://catalogue.uci.edu/donaldbrenschoolofinformationandcomputersciences/#graduatetext).

A. Complete:	
STATS 200A- 200B- 200C	Intermediate Probability and Statistical Theory and Intermediate Probability and Statistical Theory and Intermediate Probability and Statistical Theory
STATS 210	Statistical Methods I: Linear Models
STATS 210B	Statistical Methods II: Categorical Data [1]
STATS 210C	Statistical Methods III: Longitudinal Data [1]
STATS 205	Introduction to Bayesian Data Analysis
B. Complete three quarters of seminar in STATS 280.	
C. Select five additional graduate courses in or related to statistics, at least two of which are offered by the Department of Statistics. [2]	

[1] STATS 211 and STATS 212 may be substituted for STATS 210B and STATS 210C.

[2] At most one of the five elective courses may be an Individual Study (STATS 299), and only with prior approval of the Department Graduate Committee. STATS 281A-STATS 281B-STATS 281C may not be taken as an elective.

The entire program of courses must be approved by the Statistics Department Graduate Committee. Students with previous graduate training in statistics may petition the Committee to substitute other courses for a subset of the required courses. Students are required to pass a comprehensive data analysis examination ordinarily at the end of the first year, covering the material from STATS 210, STATS 210B, and STATS 210C, *or* STATS 210, STATS 211, and STATS 212.