SAN FRANCISCO STATE UNIVERSITY

Masters of Science in Statistical Data Science

Department of Mathematics
College of Science and Engineering

The purpose of the program is to deliver a comprehensive curriculum in the field of statistical data science to prepare students with backgrounds in statistics, mathematics, computer science, engineering, and other quantitative fields, for the data science workforce or a doctoral program.

Admission Requirements

• **Baccalaureate degree** from a regionally accredited institution, or shall have completed equivalent academic preparation as determined by the appropriate campus authority;

• **Baccalaureate degree** in a quantitative field in but not limited to statistics, mathematics, computer science, physics, engineering or relevant fields. Successful applicants are expected to have completed three semesters of **calculus, linear algebra, and upper division undergraduate courses in probability and statistics with a grade of B or better.** However, an applicant who is deficient in probability theory and/or statistics may be admitted conditionally on passing **MATH 440 Probability and Statistics I and/or MATH 441/741 Probability and Statistics II** satisfactorily during the first calendar year of study;

• **Good academic standing** at the last college or university attended;

• **3.0 GPA** in their earned undergraduate degree or in the last **60 semester (90 quarter) units** completed, or have earned a post-baccalaureate degree.

Application Process

• Apply to San Francisco State University using the Cal State Apply website: **https://www2.calstate.edu/apply**

• Prepare the following documents to upload:
  • **Personal Statement** of Purpose
  • Minimum of **two letters of recommendation**
  • **Transcript(s)**

• **International Students** refer to the website: https://grad.sfsu.edu/content/international-application-submission

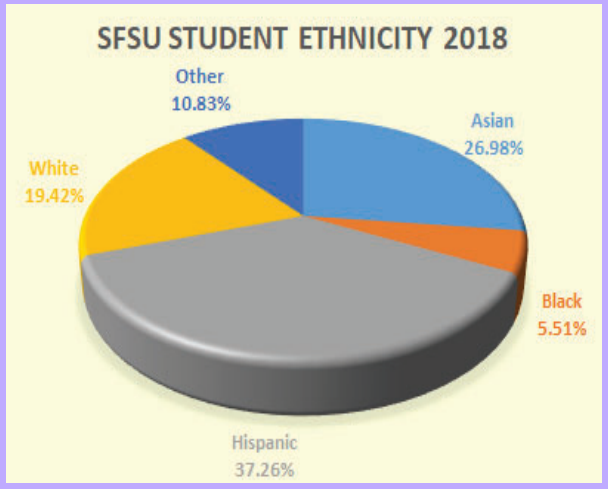
• All graduate study applicants, regardless of citizenship, whose native language is not English must demonstrate English language proficiency. To demonstrate your English language ability, you should submit an official Test of English as a Foreign Language, **TOEFL (minimum 550/80)** or International English Language Testing System, **IELTS (minimum 6.5)**

• If applicant meets the preliminary admissions criteria, then the application is forwarded to the Mathematics Department for final review

Contacts and Further Information

MS Graduate Advisors:
Dr. Mohammad Kafai (kafai@sfsu.edu)
Dr. Alexandra Piryatinska (alpiryat@sfsu.edu)

Division of Graduate Studies Website: http://grad.sfsu.edu
Office of International Programs Website: http://oip.sfsu.edu
Mathematics Department Website: http://math.sfsu.edu
Mathematics Department Faculty: http://math.sfsu.edu/faculty.php



Total Units Required to complete the Degree: 30 Units

Required Courses: 15 Units

Math 742	Advanced Probability Models	3
Math 748	Theory and Applications of Statistical and Machine Learning	3
Math 760	Multivariate Statistical Methods	3
Math 761	Computational Statistics	3
Math 895 ***OR*** Math 896EXM ***&***Math 896 ***OR*** Math 898	Data Science Internship ***OR*** Culminating Experience Exam ***&***Exam Preparation ***OR*** Master's Thesis	3

Elective Course: 15 Units

No more than **9 units** could be from **undergraduate only** courses. Per student's specialization interest and upon Graduate Advisor's approval, the student will choose a set of electives from one of the following areas:

• **Probability and Statistics Electives:**

Math 440	Probability and Statistics I	3
Math 441/741	Probability and Statistics II	3
Math 424/724	Introduction to Linear Models	3
Math 442	Probability Models	3
Math 447	Design and Analysis of Experiments	3
Math 448	Introduction to Statistical Learning and Data Mining	3
Math 449	Categorical Data Analysis	3
Math 899	Independent Study	3

• **Mathematics Electives:**

Math 400	Numerical Analysis	3
Math 430	Mathematics of Optimization	3
Math 460	Mathematical Modeling	3
Math 471/771	Fourier Analysis and Applications	3
Math 477/777	Partial Differential Equations	3
Math 495	Introduction to Wavelets and Frames with Applications	3
Math 710	Measure and Integration	3
Math 725	Advanced Linear Algebra	3

• **Computer Science Electives:**

CSC 821	Biomedical Imaging and Analysis	3
CSC 865	Artificial Intelligence	3
CSC 869	Data Mining	3
CSC 872	Pattern Analysis and Machine Intel	3
CSC 874	Topics in Big Data Analysis	3

• **Biology Electives:**

BIOL 738	Biometry and Genome Annotation	3
BIOL 710	Advanced Biometry	3
BIOL 815	Advanced Phylogenetic Analysis	3