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, engineering, computer science, and other quantitative fields, for the data science workforce or a doctoral program.

> We offer students supportive academic experiences of thinking, learning and doing by providing them with engaging instructional programs, research-enriched experiences and inspiration to participate in and lead the workforce of the future.

— Mission of College of Science and Engineering, SFSU

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

For More Information

MS Graduate Advisors:

- Dr. Mohammad Kafai (kafai@sfsu.edu)
- Dr. Alexandra Piryatinska(alpiryat@sfsu.edu)

Division of Graduate Studies:
grad.sfsu.edu (415) 338-2234

Office of International Programs:
oip.sfsu.edu (415) 338-1293

Mathematics Department : math.sfsu.edu

Mathematics Department Faculty: math.sfsu.edu/faculty

Master of Science in Statistical Data Science

Discover. Learn. Grow.

SAN FRANCISCO STATE UNIVERSITY

Application Process

- Apply to San Francisco State University using the Cal State Apply website: **https://www.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 the applicant meets the preliminary admissions criteria, then the application is forwarded to the Mathematics Department for final review.

Total Units Required to Complete the degree : 30

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)
- Option 1: (3)
  Math 895 Data Science Internship
- Option 2: (3)
  Math 896 Exam Preparation
  AND
  Math 896EXM Culminating Experience Exam
- Option 3: (3)
  Math 898 Master's Thesis

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, Mathematics, Computer Science, and Biology.

Statistics and Probability Electives

- Math 440/740 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)

Mathematics Electives

- Math 400 Numerical Analysis (3)
- Math 425 Applied and Computational Linear Algebra (3)
- Math 430 Mathematics of Optimization (3)
- Math 460 Mathematical Modeling (3)
- Math 471/771 Fourier Analysis & 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)