Master of Science in Applied Data Science

Pending Office of the Chancellor approval

This program aims to admit students from various backgrounds with undergraduate training in quantitative fields (e.g., engineering, physics, math, statistics). Applicants are expected to have some experience in programming and probability/statistics. The objective of this Applied Data Science program is to provide training in various aspects of the data lifecycle. Students will learn techniques in data collection, data cleaning, data integration, data management, and data visualization, as well as the theories and techniques necessary for data analysis from data mining, machine learning, information retrieval, and artificial intelligence.

In addition to the general requirements of the university, specific requirements for admission are:

- Official transcript(s) confirming at least a Bachelor's Degree from an accredited institution, preferably but not necessarily accredited by an accreditor endorsed by the Council for Higher Education Accreditation (CHEA);
- Applicants with unaccredited Bachelor's Degrees can be considered for admission on a case by case basis;
- Transcripted studies should reflect adequate preparation for study in the relevant graduate program;
- Programming experience equivalent to CSE 2020 and coursework in statistics and probability equivalent to Math 2265 and Math 3460;
- Minimum GPA of 3.0 preferred. Applicants with a GPA below 3.0 but above 2.5 will be considered on a case by case basis.

1. Achieved classified standing (i.e., not conditionally classified);

2. Completed a minimum of 12 units towards the Master’s degree;

3. Completed or currently registered in the four required core courses as a graduate student at this university;

4. Minimum grade point average of 3.0 ("B") in all courses completed towards the Master’s degree and a grade of "C" (2.0) or better in each course;

5. Formed a committee, consisting of the student's advisor and one other committee member (committee members must be tenure-track faculty members);

6. Presented and submitted a project proposal that was approved by the student’s committee;

7. Completed the Advancement to Candidacy form.

1. A minimum of 31 semester units of acceptable graduate-level work, with a minimum grade point average of 3.0 ("B") and a grade of "C" (2.0) or better in each course in the program;

2. Advancement to candidacy;

3. Successful completion of the Capstone Project (CSE 6880 or MATH 6880);

4. The program must be completed within a seven-year period. No more than seven years may elapse between the time of registration for the earliest course listed on the program and completion of all requirements for the degree;

5. Any additional general requirements not cited above and listed in Graduate Degree and Program Requirements (https://catalog.csusb.edu/graduate-degree-programs/graduate-degree-program-requirements/).

Degree Requirements (31 units)

Required Courses (12)		
CSE 6010	Foundations of Data Science	3
CSE 6300	Theory of Algorithms and Their Analysis	3
CSE 6320	Big Data Management	3
CSE 6330	Data Mining	3
Elective Courses (15)		
Choose five courses from the following list:		15
MATH 5565	Mathematical Statistics	
CSE 5140	Computational Intelligence	
CSE 5160	Machine Learning	
CSE 5720	Database Systems	
CSE 6220	Data Visualization	
CSE 6400	Artificial Intelligence	
CSE 6800	Distributed Database Management Systems	
Culminating Experience (4)		**4**
Total Units		**31**

CSE 6880	Data Science Capstone Project	4
OR		
MATH 6880	Data Science Capstone Project	4