Master of Science in Statistical Data Science

30 Units: Total Units Required to Complete the Degree

18 units: Required Courses				
Course	Description	Units	Offered	
Math 448	Introduction to Statistical Learning & Data Mining	3	Fall	
Math 742	Advanced Probability Models	3	Fall	
Math 748	Theory and Applications of Statistical and Machine Learning	3	Spring	
Math 760	Multivariate Statistical Methods	3	Spring	
Math 761	Computational Statistics	3	Fall	
Math 892 OR Math 895 OR Math 898	Data Science Internship OR Research Project OR Master's Thesis	3		
Total Required Courses		18		
Total Guided Electives		12		
Total Units for the major		30		

Guided Electives Courses (12 Units) – No more than 9 units should be from undergraduate only courses. Per student's interested specialization and upon Graduate Advisor's approval, the student is recommended to choose a set of electives in the following areas. The electives will be chosen from one of the areas below:

- Probability and Statistics Electives
- Mathematics Electives
- Computer Science Electives

Guided Electives in Probability and Statistics				
Course	Description	Units	Offered	
Math 440	Probability and Statistics I	3	Fall, Spring	
Math 441/741	Probability and Statistics II	3	Fall, Spring	
Math 424/724	Introduction to Linear Models	3	Spring	
Math 442	Probability Models	3	Spring	
Math 443	Introduction to Time Series Analysis	3	Fall	
Math 447	Design and Analysis of Experiments	3	Fall	
Math 449	Categorical Data Analysis	3	Spring	
Math 899	Independent Study	3		

Guided Electives in Mathematics				
Course	Description	Units	Offered	
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 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			
Math 725	Advanced Linear Algebra			

Guided Electives in Computer Science				
Course	Description	Units	Offered	
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		

If you have any questions regarding the Statistics BS, please contact <u>Dr. Alexandra Piryatinska</u> or <u>Dr. Mohammad Kafai</u>.