Statistics

Effective Spring 2018 - students entering in Fall 2017 may opt to follow this new curriculum. MS students following an earlier curriculum should contact their program advisor at ZicklinMSPrograms@baruch.cuny.edu or review the appropriate bulletin for the year they entered.

For additional program information see the Zicklin School website

The Master of Science in Statistics is designed to train students in the design and application of quantitative models to decision making in business, finance, pharmaceutical and other industries, and government. The MS program provides students with the concepts and skills that form the fundamental base of knowledge essential to statistics professionals in today's sophisticated business environment including the technical background and capabilities required for the newer approaches to overall business analytics and data mining. The MS program is designed to provide a concentrated, in-depth study of the field for those who wish to be technical specialists in statistics. Students completing the MS degree successfully go on to careers as statisticians and sometimes continue to pursue a Ph.D. in statistics. The MS is a 31.5 credit program consisting largely of statistics courses and some related business courses which can be completed either part-time or full-time. The MS program conforms with the DHS - STEM program so that international students who graduate from the MS program may be eligible for an additional 24-month extension on their optional practical training (OPT).

English Language Proficiency:*		
Students who completed their undergraduate education in a non-English speaking country will be required to take non-credit bearing modules in Grammar Troubleshooting and American English Pronunciation offered by the Division of Continuing and Professional Studies. These modules may be waived based on a waiver exam. The modules are not required for students who completed a four-year degree in an English-speaking country.		
Preliminary Courses (9 credits) Students with appropriate academic background will be able to reduce the number of credits in preliminary requirements. Grades in undergraduate mathematics courses are not calculated in the grade point average.		
MTH 2610*	Calculus I	3 credits
MTH 3010*	Calculus II	3 credits
STA 9708	Applied Statistical Analysis for Business Decisions	3 credits
*MTH 2610 and MTH 3010 are undergraduate courses. Entering students are strongly adviced to complete a minimum of six credits of calculus before starting the MS programs in Statistics, in order to waive these math requirements.		
Courses in Specialization (31.5 credits)		
Required for the General and Data Science Track (13.5 credits)		
BUS 9551	Business Communication I	1.5 credits
STA 9700	Applied Regression Analysis	3 credits
STA 9715	Applied Probability	3 credits
STA 9719	Foundations of Statistical Inference	3 credits
STA 9750	Software Tools for Data Analysis (OPR 9750)	3 credits
General Track: Choose 12 credits from the following courses:		
STA 9690**	Advanced Data Mining for Business Analytics	3 credits
STA 9701	Time Series: Forecasting and Statistical Modeling	3 credits
STA 9705	Multivariate Statistical Methods	3 credits
STA 9706	Analysis of Categorical and Ordinal Data	3 credits
STA 9710	Statistical Methods in Sampling and Auditing	3 credits
STA 9712	Advanced Linear Models	3 credits
STA 9713	Financial Statistics	3 credits

STA 9714	Experimental Design for Business	3 credits
CIS 9760	Big Data Technologies (cross-listed as MTH 9760 & STA 9760)	3 credits
STA 9783	Stochastic Processes for Business Applications (OPR 9783)	3 credits
STA 9791	Special Topics in Statistics	1 credit
STA 9792	Special Topics in Statistics	1.5 credits
STA 9793	Special Topics in Statistics	2 credits
STA 9794 (formerly STA 9772)	Special Topics in Statistics	3 credits
STA 9890**	Statistical Learning for Data Mining	3 credits
STA 9891**	Machine Learning for Data Mining	3 credits
STA 9796	Statistical Natural Language Processing	1.5 credits
STA 9797	Advanced Data Analysis	1.5 credits
STA 9850	Advanced Statistical Computing (OPR 9850)	3 credits
Data Science Track: Choose 12 credits from the following courses:		
Additional Required Courses for the Data Science Track		
STA 9705	Multivariate Statistical Methods	3 credits
STA 9890**	Statistical Learning for Data Mining	3 credits
STA 9891**	Machine Learning for Data Mining	3 credits
Choose at least 3 credits from the following courses:		
CIS 9760	Big Data Technologies (cross-listed as MTH 9760 & STA 9760)	3 credits
STA 9796	Statistical Natural Language Processing	1.5 credits
STA 9797	Advanced Data Analysis	1.5 credits
**Students may not receive credit for STA 9690 and STA 9890 and/or STA 9891.		
Business Electives for General Track and Data Science Track (6 credits):		
Choose 9000-level courses from the graduate offerings of the Zicklin School of Business, with the exception of STA 9708; courses applied towards a prior master's degree; or courses that do not allow credit to be given for both that course and another statistics course. Students may take additional statistics courses as their business electives.		

Note that BUS 9551 is effective for all MS-Statistics students admitted in spring 2016 or later. Students admitted prior to spring 2016 should consult their preliminary course evaluation and/or waiver exam results, since other requirements and conditions may apply.