

COMPUTATIONAL STATISTICS AND DATA ANALYTICS GRADUATE CERTIFICATE

Students pursuing a graduate certificate in Computational Statistics and Data Analytics need to complete four graduate-level courses (16 credit hours). Below is the list of the two core required courses and two elective courses.

Course	Title	Quarter Hours
MAT 449	STATISTICAL DATA MANAGEMENT	4
MAT 491	DATA MINING	4
Select two of the following:		8
MAT 426	GENERALIZED LINEAR MODELS	
MAT 427	BAYESIAN STATISTICS	
MAT 442	APPLIED STATISTICS II	
MAT 443	APPLIED STATISTICS III	
MAT 450	ADVANCED STATISTICAL COMPUTING	
MAT 454	MULTIVARIATE STATISTICS	
MAT 455	STOCHASTIC PROCESSES	
MAT 456	APPLIED REGRESSION ANALYSIS	
MAT 459	SIMULATION MODELS AND MONTE CARLO METHOD	
MAT 484	MATHEMATICAL MODELING	
MAT 488	OPERATIONS RESEARCH: OPTIMIZATION THEORY	
MAT 512	APPLIED TIME SERIES AND FORECASTING	

In special circumstances and with approval of the graduate program director, one or two of the elective courses can be substituted with other relevant courses.

Students in this certificate program must earn a grade of C- or higher in all graduate courses and finish with a cumulative GPA of 2.0 or higher.

The requirements for admission into this certificate program are:

- Bachelor's degree from an accredited institution
- Successful completion (with a grade of C- or higher) of the following undergraduate coursework:
 - A year of single-variable calculus (equivalent of MAT 150-151-152)
 - A course in linear algebra (equivalent of MAT 262)
 - A course in statistics (equivalent of MAT 348)
 - A course in computer programming (e.g., C++, Python, Java, or R)

The admission process and review of applicants is managed by the Office of Graduate Admission via the online application and follows procedures similar to those used for existing graduate programs offered by the Department of Mathematical Sciences.