

APPLIED MATHEMATICS MAJOR CHECKLIST

Major Advisor: Professor Samuel Graff (sgraff@jjay.cuny.edu)

Prerequisites: MAT 141 Pre-Calculus may be required depending on mathematics placement

CORE (15 CREDITS)

Required courses:	Comments
<input type="checkbox"/> MAT 204 Discrete Structures	
<input type="checkbox"/> MAT 241 Calculus I	
<input type="checkbox"/> MAT 242 Calculus II	
<input type="checkbox"/> CSCI 271 Introduction to Computing and Programming	
<input type="checkbox"/> CSCI 272 Object-Oriented Programming	

MATHEMATICS CORE (18 CREDITS)

Required courses:	Comments
<input type="checkbox"/> MAT 243 Calculus III	
<input type="checkbox"/> MAT 244 Calculus IV	
<input type="checkbox"/> MAT 301 Mathematical Probability & Statistics I	
<input type="checkbox"/> MAT 310 Linear Algebra	
<input type="checkbox"/> MAT 351 Ordinary Differential Equations	
<input type="checkbox"/> CSCI 373 Advanced Data Structures	

CONCENTRATION (12 CREDITS): Choose Cryptography or Data Science

CRYPTOGRAPHY	DATA SCIENCE
Required courses:	Required courses:
<input type="checkbox"/> MAT 341 Advanced Calculus I	<input type="checkbox"/> MAT 302 Probability & Mathematical Statistics II
<input type="checkbox"/> MAT 410 Abstract Algebra	<input type="checkbox"/> MAT 367 Multivariate Analysis
<input type="checkbox"/> CSCI 360 Cryptography and Cryptanalysis	<input type="checkbox"/> CSCI 362 Data Base and Data Mining
<input type="checkbox"/> MAT 460 Mathematical Cryptography	<input type="checkbox"/> MAT 455 Data Analysis

ELECTIVES (6 CREDITS)

Choose two courses:	Comments:
<input type="checkbox"/> MAT 323 Operations Research I	
<input type="checkbox"/> MAT 324 Operations Research II	
<input type="checkbox"/> MAT 352 Partial Differential Equations	
<input type="checkbox"/> MAT 371 Numerical Analysis	
<input type="checkbox"/> MAT 4xx Game Theory	
<input type="checkbox"/> MAT 3xx Stochastic Processes	
<input type="checkbox"/> MAT 365 Signal Processing	
<input type="checkbox"/> MAT 3xx Internship	
<input type="checkbox"/> MAT 380 Special Topics	
<input type="checkbox"/> MAT 442 Advanced Calculus II	