

## MINOR IN APPLIED MATHEMATICS AND STATISTICS

Sample Programs (version Aug 5, 2021)

The following sample programs satisfy the requirements for the Minor in Applied Mathematics and Statistics. These are meant to be illustrative, not prescriptive. The number of credits follows.

1. Student with interest in data science	
110.202 Calculus III	4
553.291 Linear Algebra & Differential Equations	4
553.310 Probability and Statistics	4
553.436 Introduction to Data Science	4
553.413 Applied Statistics and Data Analysis	4
2. Student with interest in econometrics:	
553.291 Linear Algebra & Differential Equations	4
553.420 Introduction to Probability	4
553.430 Introduction to Statistics	4
553.488 Computing for Applied Mathematics	3
180.334 Econometrics (Q)	3
3. Student majoring in electrical engineering:	
553.291 Linear Algebra & Differential Equations	4
553.420 Introduction to Probability	4
553.430 Introduction to Statistics	4
553.391 Dynamical Systems	4
553.493 Mathematical Image Analysis	3
4. Student majoring in computer science:	
553.291 Linear Algebra & Differential Equations	4
553.385 Numerical Linear Algebra	4
553.371 Cryptology and Coding	4
553.472 Graph Theory	4
601.226 Data Structures (Q)	3
5. Student interested in business applications:	
553.291 Linear Algebra & Differential Equations	4
553.310 Probability and Statistics	4
553.413 Applied Statistics and Data Analysis	4
553.361 Introduction to Optimization	4
553.442 Investment Science	4
6. Student (engineering) interested in Operations Research and Consulting:	
553.291 Linear Algebra & Differential Equations	4
553.310 Probability and Statistics	4
553.361 Introduction to Optimization	4
553.400 Mathematical Modeling and Consulting	4
553.385 Numerical Linear Algebra	4
7. Premedical student, with an interest in medical statistics:	
553.291 Linear Algebra & Differential Equations	4
553.420 Introduction to Probability	4
553.430 Introduction to Statistics	4
553.432 Bayesian Statistics	3
553.413 Applied Statistics and Data Analysis	4
8. Student interested in finance:	
553.291 Linear Algebra & Differential Equations	4
553.420 Introduction to Probability	4
553.430 Introduction to Statistics	4

553.444 Introduction to Financial Derivatives	4
553.445 Interest Rate and Credit Derivatives	4
553.488 Computing for Applied Mathematics	3