Data Science Major

Prerequisites: 15 points

1) Calculus I
2) Calculus II
3) Calculus III
4) Linear Algebra (Math or Applied Math)
5) STAT 1201 (Calculus-Based Introduction to Statistics)*

Core: 8 courses (STAT and COMS)

STAT (12 points):

1) STAT 4203 (Probability Theory)
2) STAT 4204 (Statistical Inference)
3) STAT 4205 (Linear Regression Models)
4) STAT 4241 (Statistical Machine Learning) ***or*** COMS 4771 (Machine Learning)

COM (12 points)

1) Introduction to Computer Science: COMS 1004, COMS 1005, ENGI 1006, or COMS 1007
2) Data Structures: COMS 3134, COMS 3136, or COMS 3137
3) Discrete Math: COMS 3203
4) Analysis of Algorithms: CSOR 4231

Electives: 5 Courses

<u>STAT: 2 from the following</u>

1) STAT 3106 (Applied Data Mining)
2) STAT 4206 (Statistical Computing and Introduction to Data Science)
3) STAT 4243 (Applied Data Science)
4) STAT 4224 (Bayesian Statistics)
5) STAT 4242 (Advanced Machine Learning)

<u>COMS: 3 from the following</u>

1) COMS 3261 (Computer Science Theory)
2) COMS 4111 (Introduction to Databases)
3) COMS 4130 (Principles and Practice of Parallel Programming)
4) COMS 4236 (Introduction to Computational Complexity)
5) COMS 4252 (Introduction to Computational Learning Theory)
6) Any COMS W47XX course except COMS 4771 (These are our AI/ML oriented courses.)

* If you took one of the following in Spring 2018 or prior you may also count them as an alternate to STAT 1201: STAT 1001 (Introduction to Statistical Reasoning), STAT 1101 (Introduction to Statistics).