

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

STAT: 2 from the following

- 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)

COMS: 3 from the following

- 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).