Statistics Major Requirements (2019-2020 Flow chart)

**Computer Programming**
- COMP SCI 200 (3), 220 (4), 300 (3), 320 (4), 400 (3), 412 (3)

**Mathematics**
- MATH 221 (5): Calculus 1
- MATH 222 (4): Calculus 2
- MATH 234 (4): Calculus 3
- MATH 320 (3), 340 (3), 341 (3): Linear Algebra

**Statistics**
- STAT 302*: Intro Stats
- STAT 303 (1): Intro Stat: R
- STAT 309 (3), STAT 311(3), MATH 431(3), MATH 531 (3): Inference
- STAT 333 (3) or 340 (4): Statistical Model 1
- STAT CORE Elective (3)
- STAT 424 (3): Statistical Model 2
- Stat CORE/DOMAIN Elective (3)
- STAT 431(3), MATH 333 (3) or 340 (4): Probability

**Stat CORE Electives**
- 304 (1): R for Statistics 2
- 305 (1): R for Statistics 3
- 327 (1): Learning a Statistical Language
- 349 (3): Introduction to Time Series
- 351 (3): Introductory Nonparametric Statistics
- 360 (1-3): Topics in Statistics Study Abroad
- 405 (3): Data Science Computing Project
- 411 (3): An Introduction to Sample Survey Theory & Methods
- 421 (3): Applied Categorical Data Analysis
- 433 (3): Data Science with R
- 436 (3): Statistical Data Visualization
- 443 (3): Classification & Regression Trees
- 451 (3): Marching Learning & Statistical Pattern Classification
- 453 (3): Intro to Deep Learning & Generative Models
- 456 (3): Applied Multivariate Analysis
- 461 (3): Financial Statistics
- 471 (3): Intro to Computational Statistics
- 479 (1-3): Special Topics in Statistics

**DOMAIN Electives** (up to 6 credits)
- ACT SCI (3): Loss Models II
- ACT SCI 654 (2-3): Regression & Time Series
- CS/ECE/ME 532 (3): Matrix Methods in ML
- CS/ECE 561(3) Probability and Information Theory in ML
- ECON 570 (3): Fundamentals of Data Analytics for Economists
- GEN BUS 656(2-3): Machine Learning for Business Analytics
- GEOG 560 (3): Advanced Quantitative Methods
- I SY E 521(3): ML in Action for Industrial Engineers
- MATH 635(3): An Intro to Brownian Motion & Stochastic Calculus
- SOC 362(4): Statistics for Sociologists 3
- SOC 375 (3): Intro to Mathematical Sociology
- STAT/CS/MATH 475 (3): Intro to Combinatorics
- STAT/CS/ ISY E/MATH 525(3): Linear Optimization

A grade of “C” or above is required for Calculus 1, 2 & 3

**Stat CORE Electives**
- 304 (1): R for Statistics 2
- 305 (1): R for Statistics 3
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- 349 (3): Introduction to Time Series
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- 451 (3): Marching Learning & Statistical Pattern Classification
- 453 (3): Intro to Deep Learning & Generative Models
- 456 (3): Applied Multivariate Analysis
- 461 (3): Financial Statistics
- 471 (3): Intro to Computational Statistics
- 479 (1-3): Special Topics in Statistics

* See The Guide for full list of Electives

Revised May 2023 (updating additional electives)