

Certificate in Applied Statistical Modeling Course Requirements (2016–2018 Catalog)

Policies and Procedures

- Total of 18 hours (six courses in sections II. – VI. below) **must be completed with a grade of B- or higher.**
- No transfer credit or credit-by-exam may be used to fulfill certificate course requirements (except for prerequisite).
- Not all courses listed in this document are offered every semester. See UT course schedule for available class offerings.
- See SDS website for how to enroll: stat.utexas.edu/undergraduate/certificate-in-applied-statistical-modeling

I. Prerequisite Knowledge (choose one)

Mathematics: 408D Differential & Integral Calculus, 408M Multivariable Calculus

II. Mathematical Foundations of Statistics

Course 1 (choose one)

Statistics & Data Sciences: 321 Intro to Probability & Statistics

Mathematics: 362K Probability I

Electrical Engineering: 303 Probability & Random Processes

III. Mathematical Foundations of Statistics

Course 2 (choose one)

Statistics & Data Sciences: 358 Statistical Learning & Inference

Mathematics: 378K Intro to Mathematical Statistics

IV. Applied Statistics, Data Mining, or Machine Learning Course 1 (choose one)

Statistics & Data Sciences: 302 Data Analysis for the Health Sciences, 304 Statistics in Health Care, 306 Statistics in Market Analysis, 328M Biostatistics

Statistics (IROM): 309 Elementary Business Statistics

Mathematics: 358K Applied Statistics

Economics: 329 Economic Statistics

Educational Psychology: 371 Intro to Statistics

Psychology: 418 Statistics & Research Design

Sociology: 317L Intro to Social Statistics

V. Applied Statistics, Data Mining, or Machine Learning Course 2 (choose one)

Statistics & Data Sciences: 325H Honors Statistics, 332 Statistical Models for the Health & Behavioral Sciences, 352 Statistical Modeling

Statistics (IROM): 371G/H Statistics & Modeling/Honors, 375/H Statistics & Modeling for Finance

Economics: 341K Intro to Econometrics

VI. Electives (choose two, one must be upper-division)

Statistics & Data Sciences: 353 Advanced Multivariate Modeling, 358.1 Applied Regression Analysis, 374E Visualization & Data Analysis, 375 Special Topics in Scientific Computation, 379R Undergraduate Research*

**Research Course: students must have a faculty supervisor and propose an original research project topic to be approved by the SDS Faculty Committee prior to enrollment. A final research paper is submitted at the end of the semester and reviewed to ensure it meets certificate requirements.*

Statistics (IROM): 372.4 Multivariate Statistical Analysis, 372.5 Financial & Econometric Time Series Modeling, 376 Intermediate Statistics

Advertising: 344K Advertising Research

Communication Studies: 348 Communication Research Methods

Computer Science: 343 Artificial Intelligence

Economics: 350K.4 Advanced Econometrics, 354K Intro to Game Theory

Electrical Engineering: 361M Intro to Data Mining

Geological Sciences: 325K Computational Methods, 365N Seismic Data Processing

Health Education: 343 Foundations of Epidemiology*, 373 Evaluation & Research Design

**HED 343: open to non-majors in fall term only*

Kinesiology: 376 Measurement in Kinesiology

Mathematics: 339J Probability Models with Actuarial Applications, 349P Actuarial Statistical Estimate, 349R Applied Regression & Time Series, 362M Introduction to Stochastic Processes, 375T Generalized Linear Models

Management Information Systems: 373.17 Pred Analytics & Data Mining

Public Health: 354 Epidemiology

Petroleum & Geosystems Engineering: 378 Applied Reservoir Characterization

Psychology: 325K Advanced Statistics

Radio, Television, & Film: 330K Intro to Research Methods

Sociology: 369L Analytical Demography