STATISTICS AND DATA SCIENCE, MINOR

The aim of statistical modeling is to empower effective decision making, and the field's unique contribution is its ability to incorporate multiple levels of uncertainty in the framing of wise decisions. Over the last few years, the development of new computational tools and the unprecedented evolution of "big data" have propelled statistical modeling to new levels. Today, statistical modeling and machine learning have reached a level of impact that no large organization can afford to ignore. The information landscape is changing as it has never changed before.

For more information: https://statistics.wharton.upenn.edu/programs/undergraduate/statistics-minor/

Statistics and Data Science, Minor

This minor is for students outside of Wharton. Single-degree and dual-degree students with Wharton may pursue a statistics concentration instead.

Code	Title	Course Units
Three Required Courses		
MATH 1410	Calculus, Part II	1
or MATH 1080	Mathematics of change, Part II	
or MATH 1610	Honors Calculus	
STAT 1020	Introductory Business Statistics	1
or STAT 1028	Introductory Business Statistics	
or STAT 1120	Introductory Statistics	
or STAT 4310	Statistical Inference	
or ESE 4020	Statistics for Data Science	
or ECON 2310	Econometric Methods and Models	
STAT 4300	Probability	1
or ESE 3010	Engineering Probability	
Additionally select 4 CU's from the following electives:		**4**
STAT 4050	Statistical Computing with R	
STAT 4100	Data Collection and Acquisition: Strategies and Platforms	
STAT 4220	Predictive Analytics for Business	
STAT 4230	Applied Machine Learning in Business	
STAT 4240	Text Analytics	
STAT 4320	Mathematical Statistics	
STAT 4330	Stochastic Processes	
STAT 4350	Forecasting Methods for Management	
STAT 4420	Introduction to Bayesian Data Analysis	
STAT 4700	Data Analytics and Statistical Computing	
STAT 4710	Modern Data Mining	
STAT 4730	Data Science Using ChatGPT	
STAT 4750	Sample Survey Design	
STAT 4760	Applied Probability Models in Marketing	
STAT 4770	Introduction to Python for Data Science	
STAT 4800	Advanced Statistical Computing	
STAT 4810	Convex Optimization for Statistics and Data Science	
STAT 4830	Numerical Optimization for Data Science and Machine Learning	
STAT 5200	Applied Econometrics I	
STAT 5210	Applied Econometrics II	
Total Course Units		**7**

The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2025 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.