Statistics and Data Science — PhD

The Doctor of Philosophy program in the field of Statistics and Data Science (CIP code: 30.7001) is designed to prepare students for research and teaching positions in academia, industry, or government. Graduates are expected to have a broad set of fundamental skills in statistics and data science, as well as the ability to collaborate with researchers in applied fields through the formulation and implementation of novel statistical models and methods.

The program provides rigorous training in theory, methodology, and application of statistics and data science, and offers the opportunity to work with faculty on advanced research topics covering a wide range of theory and application areas. The PhD in Statistics and Data Science requires 60 credit hours, which include both required and elective coursework.

In order to demonstrate mastery of the subject matter, students are required to pass two qualifying exams: the first in theoretical statistics and data science and the second in statistical and data science methodology. These exams are typically taken by the end of the second year of study. In addition to coursework and qualifying exams, students are required to successfully defend their dissertation proposal and to present a final oral defense of their dissertation before a committee of faculty members.

In addition to coursework, research, and other program requirements, students in the Ph.D. program in Statistics and Data Science at Auburn University are expected to engage with the broader academic community through a range of activities. These activities include attending seminars, presenting at conferences, and publishing research articles. The requirement for students to engage with the broader academic community through such activities is designed to provide students with a comprehensive education in statistics and data science, as well as to help them build a strong professional network and establish themselves as experts in the field.

Overall, the PhD program in Statistics and Data Science provides students with the skills, knowledge, and experience needed to pursue successful careers in a wide range of fields in academia, industry, and government.

Code	Title	Hours
Statistics and Data Science - PhD		
Core I - Required		**15**
STAT 7600	Statistical Theory and Methods I	
STAT 7610	Statistical Theory and Methods II	
STAT 7020	Regression Analysis	
STAT 7840	Applied Multivariate Statistical Analysis	
STAT 7650	Computational Statistics	
Core II		**18**
Select 12 credits from the following:		
STAT 7860	Applied Time Series Analysis	
STAT 7700	Generalized Linear Models	
STAT 7030	Categorical Data Analysis	
STAT 7850	Theory of Statistical Inference	
STAT 7800	Linear Models	
STAT 7820	Applied Stochastic Processes I	
STAT 7830	Applied Stochastic Processes II	
STAT 7630	Bayesian Statistics	
Select 6 credits from the following:		
MATH 7800	Probability I	
MATH 7810	Probability II	
MATH 7820	Applied Stochastic Processes I	
MATH 7200	Real Analysis I	
MATH 7210	Real Analysis II	
STAT 7930	**Statistical Consulting Practicum**	**3**
STAT 7XXX - Statistics Seminar		**2**
Select advisor approved electives		**12**

STAT 8990	**Research and Dissertation**	**10**
Total Hours		**60**