

# MS in Applied Statistics and Data Science

The MS in Applied Statistics and Data Science (<https://www.apu.edu/clas/programs/applied-statistics-masters/>) program provides professional preparation for careers involving the use of data analysis to inform decisions. The program includes required courses providing a foundation in statistical methods and theory, and electives that allow students to emphasize biostatistics or business analytics and explore a variety of statistical models and techniques for analyzing data. Expertise in the use of statistical software packages is developed. In keeping with the mission of Azusa Pacific University, this program encourages an active conversation about the role of a Christian perspective in the field of applied statistics, particularly in terms of ethical issues prevalent in data science.

## Requirements

Code	Title	Units
<b>Core Courses</b>		
STAT 501	Introduction to Modeling with Probability	3
STAT 511	Applied Regression Analysis	3
STAT 521	Statistical Computing and Programming	3
STAT 542	Applied Logistic Regression and Survival Analysis	3
STAT 592	Ethics in Data Analytics	2
<b>Culminating Experience</b>		
STAT 596	Practicum	1
STAT 597	Statistical Consulting Practicum	4
STAT 598	Culminating Project	4
<b>Elective Courses</b>		
MATH 199	Calculus Fundamentals for Statistics <sup>1</sup>	
MATH 299	Linear Algebra Fundamentals for Statistics <sup>1</sup>	
STAT 502	Mathematical Statistics	
STAT 512	Analysis of Variance and Design of Experiments	
STAT 541	Epidemiology Research Methods	
STAT 543	Advanced Modeling for Data Science	
STAT 551	Data Visualization	
STAT 552	Time Series Analysis and Forecasting	
STAT 553	Data Mining	
STAT 571	Applied Multivariate Analysis	
STAT 572	Applied Bayesian Analysis	
STAT 573	Applied Nonparametric Statistics	
STAT 574	Discrete Data Analysis	
STAT 575	Applied Survey Sampling	
STAT 595	Special Topics in Applied Statistics	
CS 532	Machine Learning	
<b>Total Units</b>		<b>32</b>

<sup>1</sup> Does not count toward elective credit; required if not taken previously.

## Admission

University graduate admission and program-specific requirements must be met before an application is complete (see Admission to the University (<http://catalog.apu.edu/admissions/>)). **Program-specific application requirements are available online (<https://www.apu.edu/graduateprofessional/apply/>).**

International students should contact Graduate and Professional Admissions (<https://www.apu.edu/graduateprofessional/apply/>) for application procedures.