

## Degree Requirements

The program begins with two noncredit mathematics and computing skills courses. These courses begin in early August for on-campus students and mid May for online students. The Math Skills for Statistical Analysis (MSSA) course provides an intensive review of the necessary methods in calculus and linear algebra to ensure that all students are prepared and have consistent skill sets. The Computing Skills for Statistical Analysis (CSSA) course introduces you to SAS and R software applications for use throughout the program.

The M.A.S. program concludes with a six-week capstone consulting class in May and June, during which you will work on genuine client problems, learn communication skills, and complete a consulting project that allows you to apply the methods learned during the year.

## Career Opportunities

Statisticians and data scientists are in high demand in all areas of industry, especially the high-tech, medical, and pharmaceutical sectors for functions such as market research and product development. This master's degree will help you advance your career by teaching you how to apply statistical procedures to these and other industries.

According to the Bureau of Labor Statistics, employment of statisticians is projected to grow by 33 percent between 2016 and 2026. Businesses will need statisticians and data scientists to analyze the increasing volume of digital and electronic data.



# MASTER OF APPLIED STATISTICS

IN DATA SCIENCE OR  
STATISTICAL SCIENCE

ONLINE AND ON CAMPUS

Develop your analytical and  
computing skills to meet the  
growing need for data science  
and statistics professionals.

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STATISTICS  
COLORADO STATE UNIVERSITY

An equal-access and equal-opportunity University

## Statistics Department

The Department of Statistics at Colorado State University, located near the foothills of the beautiful Rocky Mountains, enjoys an international reputation. The faculty are actively involved in the application of statistics to real-world problems across a wide variety of areas. These include biological, environmental, financial, and industrial applications.

## Program Highlights

- Full-time students can complete in one year; individualized part-time options available
- Courses are taught by experienced CSU statistics professors
- Curriculum may be adapted to students' needs
- Live lectures with archived videos available online
- Personalized learning experience

## Minimum Admission Requirements

- A four-year bachelor's from a regionally accredited university
- Calculus up to and including multivariable calculus
- A course in linear algebra
- At least one undergraduate-level statistics course
- GRE scores within last two years or CSU's MAS math entrance exam.

FOR APPLICATION AND MORE INFORMATION:  
[MAS.COLOSTATE.EDU](https://mas.colostate.edu)





## Data Science Specialization

The Master of Applied Statistics Data Science Specialization emphasizes practical methods in statistics and data science, focusing on applications and computational aspects. The goal of this degree is to enable students to start working as data scientists in business, industry, or government immediately after graduation. Students will receive a strong background

in statistical and business computing while completing this degree. Full-time students complete the M.A.S. degree in 11 months; however, this degree may also be completed part-time, either online or on campus. Students who succeed in the field of data science typically have strong quantitative skills, analytical minds, and like to help other people solve problems.

### M.A.S. – Data Science Specialization [30-31 credits]

Code	Title	Credits
<b>REQUIRED COURSES [27 CREDITS]</b>		
<b>STATISTICS [18 CREDITS]</b>		
STAA 551	Regression Models and Applications	2
STAA 552	Generalized Regression Models	2
STAA 553	Experimental Design	2
STAA 555	Statistical Consulting Skills	1
STAA 556	Statistical Consulting	2
STAA 561	Probability with Applications	2
STAA 562	Mathematical Statistics with Applications	2
STAA 565	Quantitative Reasoning	1
STAA 577	Statistical Learning and Data Mining	2
STAA 578	Machine Learning	2
<b>MATHEMATICS [3 CREDITS]</b>		
MATH 560	Linear Algebra	3
<b>COMPUTER INFORMATION SYSTEMS [6 CREDITS]</b>		
CIS 605	Business Visual Application Development	3
CIS 655	Business Database Systems	3
<b>ELECTIVES [3-4 CREDITS]</b>		
CIS 570	Business Intelligence	3
CIS 575	Applied Data Mining and Analytics in Business	3
STAA 554	Mixed Models	2
STAA 574	Methods in Multivariate Analysis	2
STAA 575	Applied Bayesian Statistics	2

## Statistical Science Specialization

The Master of Applied Statistics Statistical Science Specialization emphasizes the practical application of statistics. The innovative curriculum with 19 courses and 31 credits can be completed full-time in one year or part-time in two to four years. This broad background in applied statistics will allow students to start working immediately as practicing statisticians upon graduation.

### M.A.S. – Statistical Science Specialization [31 credits]

Code	Title	Credits
<b>REQUIRED COURSES</b>		
STAA 551	Regression Models and Applications	2
STAA 552	Generalized Regression Models	2
STAA 553	Experimental Design	2
STAA 554	Mixed Models	2
STAA 555	Statistical Consulting Skills	1
STAA 556	Statistical Consulting	2
STAA 561	Probability with Applications	2
STAA 562	Mathematical Statistics with Applications	2
STAA 565	Quantitative Reasoning	1
STAA 566	Data Visualization Methods	1
STAA 567	Computational and Simulation Methods	1
STAA 568	Topics Industrial/Organizational Statistics	1
STAA 574	Methods in Multivariate Analysis	2
STAA 575	Applied Bayesian Statistics	2
<b>SELECT 8 CREDITS FROM THE FOLLOWING:</b>		<b>8</b>
STAA 571	Survey Statistics	2
STAA 572	Nonparametric Methods	2
STAA 573	Analysis of Time Series	2
STAA 576	Methods in Spatial Statistics	2
STAA 577	Statistical Learning and Data Mining	2
STAA 578	Machine Learning	2
<b>PROGRAM TOTAL CREDITS</b>		<b>31</b>

*“This program is beneficial for new and seasoned statisticians alike. The curriculum stays current with new methodology and trends.”*

*M.A.S. student, 2017*

