

# MASTER OF SCIENCE IN STATISTICS AND DATA SCIENCE

The Master of Science in Statistics and Data Science is a thirty-six hour program designed to produce professionally competent statisticians who will be able to accept positions in business, industry and public service. The degree also provides the academic foundations needed to pursue doctoral studies. The program may be completed with or without a thesis.

**Additional information:** Reference the Program Landing Page (<https://www.shsu.edu/programs/graduate/statistics/>) for additional information, such as cost, delivery format, contact information, or to schedule a visit.

Applicants seeking admission to the graduate program in Statistics and Data Science must submit the following directly to the Office of Graduate Admissions (<https://www.shsu.edu/beabearkat/graduate-journey/>):

1. Graduate Application (<http://www.shsu.edu/admissions/apply-texas.html>)
2. Application fee (<http://www.shsu.edu/dept/graduate-studies/application-fee.html>)
3. Official transcript(s) of all previous college work
4. Official GRE scores. GRE is recommended but not required. Although it is not required, the graduate admissions committee will use it in ranking purposes.
5. Official TOEFL or IELTS scores (for international applicants)
6. Three letters of recommendation

An overall undergraduate GPA of 3.0 or higher is preferred for admission into the Statistics and Data Science program. However, GPA and GRE scores do not constitute the primary criteria for admission. Based on a review of an applicant's undergraduate transcript, the Department of Mathematics and Statistics may require completion of undergraduate stem courses as a condition for admission.

The degree requires a minimum of thirty-six hours of graduate credit. An oral comprehensive examination is administered by the advisory committee for each degree candidate. The oral examination must be scheduled with the Graduate Advisor at least three weeks in advance. Students must be enrolled the semester in which they take the comprehensive examination. Requirements specified in the degree plan are subject to minor modification by the department. Also, to ensure a balanced program, all electives must be approved by the graduate advisor or an authorized representative of the graduate Statistics faculty.

## Master of Science (MS) in Statistics and Data Science (Thesis option)

Code	Title	Hours
<b>Master of Science in Statistics and Data Science (Thesis)</b>		
<b>Specified Courses</b>		
STAT 5333	Design and Analysis of Experiments	3
STAT 5361	Theory and Application of Probability	3
STAT 5362	Theory and Application of Statistics	3
STAT 5364	Applied Multivariate Statistical Analysis	3
STAT 5368	Regression Modeling & Analysis	3
<b>Electives</b>		
Select five of the following:		15
MATH 5360	Special Topics	
MATH 6368	Numerical Linear Algebra	
STAT 5360	Special Topics In Statistics	
STAT 5365	Linear Statistical Models	
STAT 5366	Sampling Methods	
STAT 5367	Reliability Analysis and Quality Control	
STAT 5369	Statistical Computing and Consulting	
STAT 5370	Nonparametric Statistics	
STAT 6366	Applied Bayesian Analysis	
STAT 6375	Biostatistics	
STAT 6376	Time Series Analysis	
STAT 6377	Introduction to Survival Analysis	
STAT 6378	Longitudinal Data Analysis	
<b>Thesis</b>		
STAT 6099	Research and Thesis	3

STAT 6398	Research And Thesis	3
<b>Total Hours</b>		<b>36</b>

## Master of Science (MS) in Statistics and Data Science (non-thesis option)

Code	Title	Hours
<b>Master of Science in Statistics and Data Science (Non-thesis)</b>		
<b>Specified Courses</b>		
STAT 5333	Design and Analysis of Experiments	3
STAT 5361	Theory and Application of Probability	3
STAT 5362	Theory and Application of Statistics	3
STAT 5364	Applied Multivariate Statistical Analysis	3
STAT 5368	Regression Modeling & Analysis	3
STAT 6380	Statistics Practicum	3
<b>Electives</b>		
Select six of the following:		18
MATH 5360	Special Topics	
MATH 5370	Fourier Analysis & Application	
MATH 6368	Numerical Linear Algebra	
MATH 6373	Applied Analysis	
MATH 6394	Scientific Computation	
STAT 5360	Special Topics In Statistics	
STAT 5365	Linear Statistical Models	
STAT 5366	Sampling Methods	
STAT 5367	Reliability Analysis and Quality Control	
STAT 5369	Statistical Computing and Consulting	
STAT 5370	Nonparametric Statistics	
STAT 6366	Applied Bayesian Analysis	
STAT 6375	Biostatistics	
STAT 6376	Time Series Analysis	
STAT 6377	Introduction to Survival Analysis	
STAT 6378	Longitudinal Data Analysis	
<b>Total Hours</b>		<b>36</b>

The Texas Higher Education Coordinating Board (THECB) marketable skills initiative is part of the state's **60x30TX plan** and was designed to help students articulate their skills to employers. Marketable skills are those skills valued by employers and/or graduate programs that can be applied in a variety of work or education settings and may include interpersonal, cognitive, and applied skill areas.

The MS in Statistics and Data Science is designed to provide graduates with the following marketable skills:

- Analyze data to solve problems in a wide variety of industries.
- Develop statistical models and communicate the results in professional reports.
- Experience with multiple phases of course preparation or teaching introductory statistics courses.
- Preparation for further study at the doctoral level in statistics or closely related areas.