# 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 |
|------|-------|-------|
| **Master of Science in Statistics and Data Science (Thesis)** | | |
| **Specified Courses** | | |
| 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 |
| **Electives** | | |
| 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 | |
| **Thesis** | | |
| STAT 6099 | Research and Thesis | 3 |

| STAT 6398 | Research And Thesis | 3 |
| --- | --- | --- |
| **Total Hours** | | **36** |

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

| Code | Title | Hours |
| --- | --- | --- |
| **Master of Science in Statistics and Data Science (Non-thesis)** | | |
| **Specified Courses** | | |
| 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 |
| **Electives** | | |
| 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 | |
| **Total Hours** | | **36** |

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.