

DATA SCIENCE: MATHEMATICS & STATISTICS, MS

Requirements for Students Matriculating in or before Academic Year 2025-2026. Learn more about Graduate College Academic Regulation 7.0 (<https://catalog.okstate.edu/graduate-college/#70>).

Total Hours: 33

Code	Title	Hours
Core Courses		
Select 15 hours:		15
IEM 5083	Data Science and Applications	
CS 5433	Big Data Management	
STAT 5543	Applied Regression Analysis	
STAT 5253	Mathematical Statistics I	
or STAT 5123	Probability Theory	
or IEM 5003	Probability and Statistics for Engineers	
IEM 5653	Data Engineering ¹	
OR		
MATH 5653	Data Engineering ¹	
OR		
STAT 5653	Data Engineering ¹	
Hours Subtotal		15
Required Courses		
Select 9 hours:		9
MATH 5503	Introduction to Optimization	
STAT 5063	Statistical Machine Learning with R	
STAT 5223	Statistical Inference	
or STAT 5263	Mathematical Statistics II	
Hours Subtotal		9
Elective Courses		
Select at least 9 hours:		9
MATH 5023	Advanced Linear Algebra	
MATH 5533	Matrix Methods in Machine Learning	
MATH 5553	Numerical Analysis for Linear Algebra	
MATH 5673	Combinatorics	
STAT 5053	Time Series Analysis	
STAT 5073	Categorical Data Analysis	
STAT 5323	Theory of Linear Models I	
IEM 5683	Advanced Data Analytics in Industrial Engineering	
IEM 5723	Data, Process and Object Modeling	
IEM 5783	Applied Statistical Analysis in R for Engineers	
CS 5233	Intro to Database Systems	
CS 5413	Data Structures and Algorithm Analysis II	
Hours Subtotal		9
Total Hours		33

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Only three of the 15 hours can be taken from IEM 5653, MATH 5653 and STAT 5653.

Graduate College Master's Program Requirements

Learn more about Graduate College 2025-2026 Master's Degree Program Requirements (<https://catalog.okstate.edu/graduate-college/>). Check the General Graduate College academic regulations for minimal GPA, language proficiency and other general requirements.