

# Master of Science in Data Science & Analytics

Catalog Year: 2025

The MSAS program is a 36 semester-hour applied graduate program designed to meet the needs of business, industry and government. The program is intended for professionals or students with undergraduate degrees in the sciences, engineering, or business.

Total Degree Credit hours: 36

## Required Courses (15 Credit Hours)

Prerequisites

DS 7020: Introductory SAS Programming for Data Science	Admission to Program	3	
STAT 7010: Mathematical Statistics I	STAT 7220 and STAT 7210	3	
STAT 7100: Statistical Methods	Admission to Program	3	
STAT 7210: Applied Regression Analysis	STAT 7100 and STAT 7020	3	
STAT 7220: Applied Experimental Design	STAT 7100 and STAT 7020	3	

## Elective Courses (6 Credit Hours)

Prerequisites

STAT 7235: Applied Longitudinal Data Analysis	STAT 7210	3	
STAT 7310: Applied Categorical Data Analysis	STAT 7210	3	
STAT 8220: Time Series Forecasting	STAT 7020 and STAT 7210	3	
STAT 8320: Applied Multivariate Data Analysis	STAT 7220 and STAT 7210	3	
STAT 8330: Applied Binary Classification	STAT 7210	3	
DS 7240: Applied Data Mining	STAT 7210	3	

## Required Project (6 to 9 Credit Hours)

Prerequisites

STAT 7125: Analysis of Human Studies	STAT 7210 or permission	3	
DS 7918: Internship	Permission of director	1-3	
DS 7940: Applied Analysis Project	Permission of director	1-9	
DS 7900: Applied Analytics Project Course	STAT 7210 or permission	3	

Minimum of 6 credit hours are required. Students can take any of the courses here **EXCEPT STAT 7125** multiple times for credits. A written report (a project proposal, a project status update, or a final project report) is required by the end of each semester when any amount of the credits are taken. If 6 credit hours are completed, students must complete 9 credit hours of Related Studies.

*Requirements continued on back*

Additional program information can be found at <https://datascience.kennesaw.edu/degrees-programs/master-degree.php>

## Related Studies (6 to 9 Credit Hours)

Select 6 to 9 credit hours of 7000-8000 level coursework from the prefixes DS, DATA, or STAT. Courses from other graduate programs (AI, IT, CS, SWE, IS) may be used with approval of the graduate program coordinator. If 6 hours are completed, students must complete 9 credit hours of Required Project courses.

### Prerequisites

DS 7120: Advanced Programming in SAS	STAT 7100 and DS 7020	3	
DS 7130: Programming in R	Admission to program	3	
DS 7140: Python for Data Science	Admission to program	3	
DS 7240: Applied Data Mining (if not taken as one of your Elective courses)	STAT 7210 or IT 7103	3	
STAT 7020: Statistical Computing and Simulation	Admission to program	3	
STAT 7110: Quality Control and Process Improvement	STAT 7100	3	
STAT 7125: Analysis of Human Studies (if not taken as Required Project course)	STAT 7210 or permission	3	
STAT 7140: Six Sigma Problem Solving	None	3	
STAT 7235: Applied Longitudinal Data Analysis (if not taken as Elective)	STAT 7210	3	
STAT 7310: Applied Categorical Data Analysis (if not taken as Elective)	STAT 7210	3	
STAT 7340: Social Network Analysis	STAT 8240 & STAT 7120	3	
STAT 7350: Structural Equation Modeling	STAT 7100	3	
STAT 7370: Applied Affinity Analysis	STAT 8250 & STAT 7120	3	
STAT 7390: Missing Data and Imputation	STAT 7210 & STAT 7120	3	
STAT 7399: Design and Analysis of Massive Survey Data	STAT 8240 & STAT 7120	3	
STAT 7450: Multilevel Statistical Models	STAT 7100 & STAT 7210	3	
STAT 7900: Special Topics	STAT 7020 & STAT 7100 or approval of Director	1-3	
STAT 7950: Directed Study	Permission of Director	3	
STAT 8220: Time Series Forecasting (if not taken as Elective)	STAT 7020 and STAT 7210	3	
STAT 8235: Advanced Longitudinal Data Analysis	STAT 8250 or Permission of Director	3	
STAT 8240: Data Mining I	Permission of Director	3	
STAT 8250: Data Mining II	STAT 8240	3	
STAT 8320: Applied Multivariate Data Analysis (if not taken as Elective)	STAT 7220 and STAT 7210	3	
STAT 8330: Applied Binary Classification (if not taken as Elective)	STAT 7210	3	
STAT 8350: Structural Equation Modeling	Admission to PhD	3	
STAT 8450: Multilevel Statistical Modeling	Admission to PhD	3	