

# MSCS2401 : Data Science

This course covers the various elements of mathematics, statistics, data structures, databases, and computer science, and how they work together to provide the optimal analysis of data. The basic techniques of data science, algorithms for data mining, and basic statistical modeling are core competencies that will be studied in depth. Data science leverages all available and relevant data to effectively provide a predictive model that can be applied to real-world business, engineering, and technical and scientific problems; this course focuses on these areas extensively. The course concludes with an analysis of data science technologies and how data scientists access data, prepare data, and conduct viable substantive research across myriad domains, including the biological sciences, medical informatics, social sciences, engineering disciplines, and business organizations of all levels.

**Credits** 3