





ANALYZE DATA AND FIND UNSEEN PATTERNS FOR INFORMED DECISION-MAKING!

# **PROGRAM DETAILS**

Data Science - Statistics Track (DS)

Department of Mathematical Sciences

College of Science & Liberal Arts

njit.edu/datascience-stats

APPLY NOW:
Office of University Admissions
(973) 596-3300
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**LEARN MORE** 



#### WHY STUDY DATA SCIENCE - STATISTICS AT NJIT?

The B.S. in Data Science - Statistics provides students with a strong, fundamental understanding of the statistical and computational tools of data analytics. The program prepares students for successful careers in data science, which has growing applications in health and medicine, finance, marketing, economics, genomics, social networks, cyber-security, journalism, and any other fields where data is collected and analyzed to glean actionable insights.

#### ABOUT THE COLLEGE OF SCIENCE & LIBERAL ARTS

The College of Science & Liberal Arts (CSLA) is distinct among the colleges and schools at NJIT in terms of its breadth and the interconnections it fosters among diverse disciplines. Our six departments—Biological Sciences, Chemistry & Environmental Science, History, Humanities & Social Sciences, Mathematical Sciences, and Physics—are home to internationally renowned research centers, award-winning researchers and educators, and outstanding students.

#### **DATA SCIENCE - STATISTICS PROGRAM OVERVIEW**

Designed for students with a strong interest in mathematics, statistical analysis, and computing, the B.S. in Data Science - Statistics develops and enhances computational and analytical skills, producing highly qualified professionals who can enter in-demand careers. Academic fields covered by the program include machine learning, statistical inference, probability, linear algebra, high performance computing, statistical computing, and data visualization.

#### **DATA SCIENCE - STATISTICS CAREER OPTIONS**

Graduates are prepared for a wide range of educational opportunities including graduate degree programs, as well as a wide variety of careers within the field of data science:

- Data Analyst
- Data Scientist
- Machine Learning Engineer
- Machine Learning Scientist
- Statistician

# PROGRAM CURRICULUM SNAPSHOT:



## Mathematics Core (51 Credit Hours)

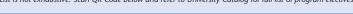
MATH	11X	Calculus I & II
MATH	213	Calculus III
MATH	244	Introduction to Probability Theory
MATH	340	Applied Numerical Methods
MATH	341	Statistical Methods II
MATH	344	Regression Analysis
MATH	345	Multivariate Distributions
MATH	391	Numerical Linear Algebra
MATH	447	Applied Time Series Analysis
MATH	448	Stochastic Simulation
MATH	461	Introduction to Statistical Computing
MATH	478	Statistical Methods in Data Science

# **Computer Science Core (21 Credit Hours)**

CS	100	Roadmap to Computing
CS	11X	Introduction to Computer Science I &
CS	241	Foundations of Computer Science I
CS	280	Programming Language Concepts
CS	301	Introduction to Data Science
CS	450	Data Visualization

### Elective Coursework (12 Credit Hours)\*

LICCLIVC	course	Work (12 Cicuit Hours)
CS	357	Fundamentals of Network Security
CS	370	Introduction to Artificial Intelligence
CS	375	Introduction to Machine Learning
CS	444	Big Data Systems
CS	408	Cryptography and Internet Security
CS	435	Advanced Data Structures and Algorithm Desig
CS	482	Data Mining
MGMT	316	Business Research Methods
MGMT	416	Artificial Intelligence for Business Decisions
MRKT	378	Marketing Analytics
MRKT	430	Marketing Research
MATH	453	High-Performance Numerical Computing
IS	333	Social Network Analysis
IS	392	Web Mining and Information Retrieval
FIN	218	Financial Markets and Institutions
FIN	306	Blockchain Technology for Business
FIN	310	Data-Driven Financial Modeling
FIN	320	Financial Data Analytics
IT	430	Ethical Hacking for System Administrators
* List is not exi	haustive. S	can OR Code below and refer to University Cataloa for full list of program elec





COLLEGE OF SCIENCE & LIBERAL ARTS

