MINOR IN STATISTICS AND DATA SCIENCE

Statistics, the science of making inferences and decisions under uncertainty, is becoming increasingly relevant in the modern world due to the widespread availability of and access to unprecedented amounts of data and computational resources. Unlike classical statistics, the need to process and manage massive amounts of data has become a key feature of modern statistics. This aspect of managing and processing data is popularly referred to as “data science.”

Through six required subjects, the Minor in Statistics and Data Science provides students with a working knowledge base in statistics, probability, and computation, along with an ability to perform data analysis.

**Foundation**

Select one of the following: 6-12

- 2.087 Engineering Mathematics: Linear Algebra and ODEs
- 6.0001 Introduction to Computer Science & 6.0002 Programming in Python and Introduction to Computational Thinking and Data Science
- 6.01 Introduction to EECS via Robotics
- 18.03 Differential Equations
- 18.06 Linear Algebra

**Statistics 1**

Select one of the following: 1

- 1.010 Probability and Causal Inference
- 6.041 Introduction to Probability
- 9.07 Statistics for Brain and Cognitive Science
- 14.30 Introduction to Statistical Methods in Economics
- 15.0791 Introduction to Applied Probability
- 16.09 Statistics and Probability
- 18.600 Probability and Random Variables

**Statistics 2**

Select one of the following: 12

- 14.32 Econometric Data Science
- 15.075[J] Statistical Thinking and Data Analysis

**Computation & Data Analysis**

Select two of the following: 24

- 1.00 Engineering Computation and Data Science
- 2.086 Numerical Computation for Mechanical Engineers
- 6.008 Introduction to Inference
- 6.036 Introduction to Machine Learning
- 6.802[J] Computational Systems Biology: Deep Learning in the Life Sciences
- 6.819 Advances in Computer Vision
- 14.36 Advanced Econometrics
- 15.053 Optimization Methods in Business Analytics
- 16.90 Computational Modeling and Data Analysis in Aerospace Engineering
- 18.065 Matrix Methods in Data Analysis, Signal Processing, and Machine Learning
- 18.642 Topics in Mathematics with Applications in Finance

**Capstone Subject**

IDS.012[J] Statistics, Computation and Applications 12

1 Consult minor advisor about potential substitutions.

2 Subject has prerequisites that are outside of the program.

A minimum of four subjects taken for the Statistics and Data Science Minor cannot also count toward a major or another minor.

See the Statistics and Data Science Minor webpage (http://idss.mit.edu/academics) for additional information. Inquiries about the undergraduate program may be directed to the IDSS Academic Office (idss_academic_office@mit.edu).