

Sample Regular Elective Courses for Statistics MS

===== Sample regular Electives from other departments =====

The following courses from other departments are examples of past regular electives.

CMSC37600 - Computational Biology
CMSC35401 - Topics in Machine Learning: Deep Learning
CMSC35410 - Spectral Methods for Machine Learning and Network Analysis
CMSC35420 - Statistical Methods in Artificial Intelligence
CMSC35610(38600) - Computational Linguistics

TTIC31010 - Algorithms
TTIC31020 - Intro to (Statistical) Machine Learning
TTIC31040 - Introduction to Computer Vision
TTIC31050 - Intro to Bioinformatics and Computational Biology
TTIC31080 - Approximation Algorithms

TTIC31100 - Computational and Metric Geometry
TTIC31110 - Speech Technologies
TTIC31120 - Statistical and Computational Learning Theory
TTIC31170 - Planning, Learning, and Estimation for Robotics and AI
TTIC31180 - Probabilistic Graphical Models

TTIC31210 - Advanced Natural Language Processing
TTIC31220 - Unsupervised Learning and Data Analysis
TTIC31230 - Fundamentals of Deep Learning
TTIC31250 - Introduction to the Theory of Machine Learning

MATH35114 - Random Matrices and Applications
MATH42900 - Mathematical Modeling of Large-Scale Brain Activity I
MATH42901 - Math Modeling of Large Scale Brain Activity II

PBHS30900 (PPHA364, BIOS29318, ENST274, STAT350) Principles of Epidemiology
PBHS33100 (STAT35600) Applied Survival Analysis
PBHS31001 (STAT35700) Epidemiologic Methods
PBHS33300 (STAT36900) Longitudinal Data Analysis
PBHS32800 - Modern Data Analysis in Biostatistics

PBHS32900 – Introduction to Clinical Trials
PBHS33000 (STAT35200) Design and Analysis of Clinical Trials
PBHS43200 (STAT33200) Causal Inference
PBHS43201 (SOCI30315, CHDV30102, STAT31900) Causal Inference II
PBHS43000 (STAT32300) Bayesian Methods and Computation

PBHS43001 (Stat32301) Advanced Bayesian Methods
PBHS43501 – Theory and Methods for Multivariate and Longitudinal Data

FINM32000 – Numerical Methods I
FINM32500 – Computing for Finance in Python
FINM32700 – Advanced Computing for Finance
FINM33000 – Mathematical Foundations of Option Pricing

FINM33165 – Prob Programming and Deep Learning
FINM33410 – Probability for Risk Management
FINM33420 – Statistical Inference for Risk Management
FINM34500 (STAT39000) Stochastic Calculus

BUSF41201 – Data Mining / Big Data
BUSF41202 – Analysis of Financial Time Series
BUSF41903 – Applied Econometrics
BUSF41204 – Machine Learning

BUSF41902 (STAT32500) – Statistical Inference
BUSF41910 (STAT33500) – Time-Series Analysis and Forecasting
BUSF41914 – Multivariate Time Series Analysis
BUSF41914 (STAT32900) Applied Multivariate Analysis

PPHA41600 – Survey Research Methodology

HGEN47100 – Human Genetics III: Intro Statistical Genetics

ECEV35600 – Principles of Population Genetics I
ECEV35700 – Principles of Population Genetics II
ECEV35400 (MGCB35401, STAT35400) Gene Regulation

===== Regular Electives from Statistics Departments =====

All advance statistics courses can be served as regular electives.

Below are sample statistics courses popular among MS students as regular electives.

- STAT30100 – Mathematical Statistics
- STAT30200 – Mathematical Statistics II
- STAT30400 – Distribution Theory
- STAT30900 – Mathematical Computation I: Matrix computation
- STAT31000 – Math Computation II: Optimization/Simulation

- STAT31100 – Math Computation III: Numerical Methods for PDE
- STAT31200 – Stochastic Processes I
- STAT33100 – Sample Surveys
- STAT33600 – Time Dependent Data
- STAT33800 – Stat Inference for Financial Data

- STAT33900 – Financial Data Analysis
- STAT39100 – Stochastic Calculus II
- STAT31700 – Introduction to Probability Models
- STAT32200 – Bayesian Statistics: Foundations and Practice
- STAT34900 – Data Analysis Project

- STAT35500 – Statistical Genetics
- STAT35900 – Statistics in Neuroscience
- STAT36100 – Statistical Neural Spike Data
- STAT37400 – Nonparametric Inference
- STAT37601 – Machine Learning & Large-Scale Data Analysis

- STAT37710 – Machine Learning
- STAT37800 – Statistical Computing
- STAT38100 – Measure Theoretical Probability I
- STAT38300 – Measure Theoretical Probability II
- STAT38500 – Advanced Topics: Probability

- STAT39600 – Nonparametric Statistics
- STAT41510 – High-dimensional Statistics / Bayesian Nonparametrics

(September 2020)