

MATHEMATICS (MATH)

MATH 524 Ops Resrch Stochastic Models (3 Credits)

Prerequisite: equivalent of MATH 351. A survey of probabilistic operations research models and applications. Topics include stochastic processes, Markov chains, queuing theory and applications, Markovian decision processes, inventory theory and decision analysis.

Prerequisite(s): MATH 551

MATH 551 Probability (3 Credits)

Prerequisite(s): equivalent of MATH 212. Topics include: combinatorial analysis, discrete and continuous probability distributions and characteristics of distributions, sampling distributions.

MATH 552 Mathematical Statistics (3 Credits)

Prerequisite(s): Consent of instructor. Concepts in statistical inference. Topics include: point and interval estimation, consistency, convergence in distribution, sufficient statistics, minimum variance unbiased estimators, method of moments, maximum likelihood estimation, small and large-sample hypothesis tests, uniformly most powerful tests and likelihood ratio tests.

MATH 555 Statistical Learning (3 Credits)

Prerequisite: equivalent of MATH 451/551. Introduction to the theory of statistical learning techniques and application of these approaches to real data. Course broadly covers supervised and unsupervised learning, including topics in regression, classification, clustering, dimensionality reduction, model evaluation and selection.

MATH 559 Topics in Statistics (1-3 Credits)

Prerequisite(s): Consent of instructor. Statistical topics not covered in other courses. Possible topics include: linear models, nonparametrics, multivariable analysis, computationally intensive methods. This course may be repeated for credit as topics change.