Statistics (STAT)

Courses

STAT 342 Applied Linear Algebra 3 Credits
The theoretical basis for applying linear algebra in other fields, including statistics. Topics will include systems of equations, vector spaces, matrices, and linear transformations. Additional topics will include matrix factorizations (including LU, QR, eigen-decomposition, and SVD) and how they can be used in computer analysis of data sets. Not available for credit to students who have completed MATH 241 or MATH 242.
Prerequisites: MATH 022 or MATH 032 or MATH 052 or MATH 082
Attribute/Distribution: Q

STAT 408 Seminar in Statistics and Probability 1-6 Credits
Intensive study of some field of statistics or probability not offered in another course. Consent of department required.

STAT 409 Seminar in Statistics and Probability 1-6 Credits
Intensive study of some field of statistics or probability not offered in another course. Consent of department required.

STAT 410 Random Processes and Applications 3 Credits
See MATH 310.

STAT 412 Advanced Applied Statistics 3 Credits
Selected advanced topics in applied statistics. Possible topics include nonparametric statistics, multivariate statistics, generalized linear model, survival analysis, time series analysis or other modern applied statistical methods with application to real world problems. Topics could vary from one semester to another depending on the interests of the faculty member and the students.
Repeat Status: Course may be repeated.

STAT 434 Mathematical Statistics 3 Credits
See MATH 334.

STAT 438 Linear Models In Statistics with Applications 3 Credits
See MATH 338.

STAT 439 Time Series and Forecasting 3 Credits
See MATH 339.

STAT 461 Topics In Mathematical Statistics 3 Credits
See MATH 461.

STAT 462 Modern Nonparametric Methods in Statistics 3 Credits
See MATH 462.

STAT 463 (MATH 463) Advanced Probability 3 Credits
See MATH 463.
Prerequisites: MATH 309 and MATH 401

STAT 464 Advanced Stochastic Processes 3 Credits
See MATH 464.

STAT 465 Statistical Machine Learning 3 Credits
See MATH 365.

STAT 471 Topics in Statistical Learning and Computing 3 Credits
Selected advanced topics in statistical learning and computing. Possible topics include linear and nonlinear regression, applied spatial statistics, applied multivariate and longitudinal data analysis, functional data analysis, survival analysis, data analytics, statistical methods that use intensive-computing or simulations, data mining techniques, with application and interpretation of a variety of statistical methods in real world problems. Topics could vary from one semester to another depending on the interests of the faculty member and the students.
Repeat Status: Course may be repeated.

STAT 474 Statistical Practice 3 Credits
Outside university consulting practice that is led by faculty members and experienced members from companies in the region. The live consulting projects provide working examples from which students gain practical experience in statistical practice. Students use this experience to assemble a portfolio of materials that demonstrates the knowledge and skills they have gained during their time in the program. This also offers opportunities to interface with working professionals through the practical training experience. Permission of instructor required.
Repeat Status: Course may be repeated.
Prerequisites: MATH 312 and STAT 438 and STAT 434 and (STAT 465 or STAT 471)