

Decision Science (D S)

D S 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S Topics in Decision Science 1-9 Hours

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad advisor in the academic unit. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program.

D S 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S Topics in Decision Science 1-9 Hours

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D S 235 Introduction to Decision Science 2 Hours

Examine modeling of business problems using methods from decision analysis, simulation and optimization.

D S 235H Introduction to Decision Science: Honors 2 Hours

Examine modeling of business problems using methods from decision analysis, simulation and optimization.

D S 372T Topics in Decision Science 3 Hours

D S 372T.11 Computational Finance 3 Hours

Introduction to the analysis and implementation of numerical methods used in finance. Explore numerical techniques in derivative pricing and optimal asset allocation, such as Monte Carlo and quasi-Monte Carlo simulation, methods for solving partial differential equations, and dynamic programming.

D S 372T.16 Optimization Method in Finance 3 Hours

Explore quantitative methods and techniques in optimization and simulation, and their use in financial decision making. Discuss theory and application in portfolio selection, options and other derivative pricing, index tracking, risk measures, volatility estimating. Examine linear, quadratic, nonlinear, and integer programming; dynamic programming; robust optimization; Monte Carlo methods and variance reduction techniques. Emphasis will be placed on problem solving with advanced computational programming languages.