

SELECT OPERATIONS RESEARCH COURSES

Other STEM-related courses from Math, Stats, Engineering, Computer Science, Business possible

As of Nov 2018

Data Analytics

ST 562 Applied Data Mining
ST 563 Into to Statistical Learning
CSC 522 Automated Learning & Data Analysis
CSC 591 Foundations of Data Science
***ISE 789 Data Science for Industrial Systems Engineers**
CSC 722 Advanced Topics in Machine Learning
BMA 790 Intro to Machine Learning in Biology

Traditional OR Skills

Stochastic Models

***OR 560 Stochastic Models in Industrial Engineering**
***OR 760 Applied Stochastic Models in ISE**
***OR 761 Queues & Stochastic Service Systems**

Simulation

***OR 562 Simulation Modeling**
***OR 762 Computer Simulation Techniques**
***OR 772 Stochastic Simulation Design & Analysis**

Optimization

***OR 501 Intro to OR**
***OR 504 Intro to Math Programming**
***OR 506 Algorithmic Methods in Nonlinear Programming**
***OR 505 Linear Programming**
OR 705 Large Scale Linear Programming
***OR 706 Nonlinear Programming**
***OR 708 Integer Programming**
***OR 709 Dynamic Programming**
OR 766 Network Flows
ISE 789 Stochastic Optimization

Statistics

ST 515 Experimental Statistics I
***ST 516 Experimental Statistics II (uses R)**
ST 711 Design of Experiments

Industrial and Systems Engineering

ISE 510 Applied Engineering Economy
ISE 552 Design and Control of Production & Service Systems
ISE 553 Modeling and Analysis of Supply Chains
ISE 723 Production Planning, Scheduling, & Inventory Control
ISE 747 Reliability Engineering
ISE 748 Quality Engineering
ISE 754 Logistics Engineering

Algorithms

***OR 537 Computer Methods & Applications (Uses Python)**
***CSC 505 Design & Analysis in IE**

Data Manipulation & Databases

ST 562 Applied Data Mining
ISE 519 Database Applications in IE
CSC 540 Database Concepts
ST 555 Stats Programming (uses SAS)

Legend

Masters-level	BMA	Biomathematics
PhD-level	CSC	Computer Science
Masters & PhD	ISE	Industrial & Systems Engineering
*Bold (any color): Counts as Core OR (need 5)	OR	Operations Research
	ST	Statistics

Restriction 1: At least one of 505, 506, 709 MUST be chosen.

Restriction 2: 504 and 505 cannot BOTH be used to satisfy this five course requirement.

Special topics courses not included

Get more details at www.or.ncsu.edu/academics/