Approved List of Major Elective Statistics Courses Offered Spring 2021

Core Courses

SDS 384: Topic 2: MATHEMATICAL STATISTICS I SDS 384: Topic 3: MATHEMATICAL STATISTICS II SDS 384: Topic 4: REGRESSION ANALYSIS SDS 384: Topic 6: DESIGN AND ANALYSIS OF EXPERIMENTS SDS 384: TOPIC 7: BAYESIAN STATISTICAL METHODS* SDS 388: CONSULTING SEMINAR

Approved Major Elective Courses - 6 hours of major elective courses to be chosen from the following list.

ASE 381P 8-STOCH ESTIMATION AND CONTROL
BIO 384K 20-REC ADVS IN COMPUTATNL BIOL*
BIO 384K: BAYESIAN MODELING*
BIO 384K: MUDDYBOOTS STATISTICS*
C E 387T DECISION, RISK, & RELIABILITY
C E 392E ACQUIS/ANLY TRANSPORTATN DATA
C E 392R DISCRETE CHOICE THRY/MODELING
CH 382L ADV PHYS CHEM: STAT MECHANICS
CS 380N: DATA MINING: A STATISTICAL LEARNING PERSPECTIVE*
CS 391D: DATA MINING: MATHEMATICAL PERSPECTIVE*
CS 395T: COMPUTATIONAL STATISTICS WITH APPLICATION TO BIOINFORMATICS*
CS 395T: SCALABLE MACHINE LEARNING
EDP 380C.16: HIERARCHICAL LINEAR MODELING
EDP 380D.12: COMPUTERIZED-BASED TESTING
EDP380D.4: PSYCHOMETRIC THEORY & METHOODS
EDP 380P: ITEM RESPONSE THEORY
EDP 381E ADVANCE ITEM RESPONSE THEORY
EDP 382K APPLIED BAYESIAN ANALYSIS*
EDP 382K: ADVANCED STATISTICAL MODELING
EDP 382K: ANALYSIS OF CATEGORICAL DATA
EDP 382K: FACTOR ANALYSIS
EDP 382K: STRUCTURAL EQUATION MODELING
EDP 382K: SURVEY OF MULTIVARIATE METHODS
EDP 384: META-ANALYSIS
EE 380L: DATA MINING*
EE 380L: INTRODUCTION TO PATTERN RECOGNITION AND COMPUTER VISION*
EE 380N: STOCASTIC CONTROL THEORY
EE 381J: PROBABILITY AND STOCHASTIC PROCESSES I
EE 381M: PROBABILITY AND STOCHASTIC PROCESSES II

EE 381V: ADVANCED DATA MINING		
FIN 395 4-EMPIRCL METHS ASSET PRICING		
M 389J PROBABILITY MODELS WITH ACTURARIAL APPLICATIONS		
M 389P ACTURIAL STATISTICAL ESTIMATES		
M 394C STOCHASTIC PROCESSES I		
MIS 382N DATA MINING FOR BUSINESS INTELLIGENCE		
ORI 390R 5-APPLIED STOCHASTIC PROCESSES*		
ORI 390R 8-UEUEING THEORY		
ORI 390R 9-SYSTEMS SIMULATION *		
ORI 390R: APPLIED STOCHASTIC PROCESSES		
ORI 390R: MARKOV DECISION PROCESSES*		
ORI 390R: RELIABILITY THEORY AND MODELING		
ORI 390R: TIME SERIES ANALYSIS		
ORI 391Q: STOCHASTIC OPTIMIZATION*		
ORI 397 INTRODUCTION TO DECISION ANALYSIS		
ORI 397: DECISION MAKING		
ORI 397: NUCLEAR SAFETY AND SECURITY		
PSY 394T STRUCTURAL EQUATION MODELING		
PSY 394U ANALYSIS OF FMRI DATA		
PSY 394U/ SDS 384/ NEU 385L BOOTSTRAP STATISTICS*		
SDS 380D. STATISTICAL METHODS II		
SDS 383C STATISTICAL MODELING I		
SDS 383D STATISTICAL MODELING II		
SDS 384: TOPIC 1: APPLIED PROBABILITY		
SDS 384: TOPIC 10: STOCHASTIC PROCESSES		
SDS 384: TOPIC 5: MULTIVARIATE STATISTICAL ANALYSIS		
SDS 384: TOPIC 8: TIME SERIES ANALYSIS		
SDS 384: TOPIC 9: COMPUTATIONAL STATISTICS*		
SDS 385: EVENT HISTORY ANALYSIS		
SDS 385: SOCIAL STATISTICS: DISCRETE MULTIVARIATE MODELS		
SDS 385: SOCIAL STATISTICS: DYNAMIC MODELS AND LONGITUDINAL DAT ANALYSIS	IA	
SDS 385: TOPIC 3: APPLIED MULTIVARIATE METHODS		
SDS 385: TOPIC 4: ANALYSIS OF CATEGORICAL DATA		
SDS 385: TOPIC 5: STRUCTURAL EQUATION MODELING		
SDS 385: TOPIC 6: HIERARCHICAL LINEAR MODELING		
SDS 385: TOPIC 7: SURVEY SAMPLING AND METHODOLOGY		
SDS 385: TOPIC 8: INTRODUCTION TO BAYESIAN METHODS*		
SDS 385: TOPIC 9: LONGITUDINAL DATA ANALYSIS		
SDS 385: TOPIC 10: MODERN STATISTICAL METHODS*		
SDS 385: TOPIC 12: META-ANALYSIS		
SDS 385: TOPIC 13: FACTOR ANALYSIS		
SDS 385: TOPIC 14: MAXIMUM-LIKELIHOOD STATISTICS		
SDS 385: TOPIC 15: SURVIVAL ANALYSIS/DURATION MODELING		

SDS 386C PROBABILISTIC GRAPHICAL MODELS
SDS 386D MONTE CARLO METHODS IN STATISTICS
SDS 387 LINEAR MODELS
SDS 389 TIMES SERIES & DYNAMIC MODELS
SDS 391D. DATA MINING*
SDS 392M. COMPUTATIONAL ECONOMICS*
SDS 393D. NUMERICAL ANALYSIS: INTERPOLATION, APPROXIMATION,
QUADRATURE, AND DIFFERENTIAL EQUATIONS
SDS 394: SCIENTIFIC AND TECHNICAL COMPUTING*
SDS 394C. PARALLEL COMPUTING FOR SCIENTISTS AND ENGINEERS*
SDS 394D. DISTRIBUTED AND GRID COMPUTING FOR SCIENTISTS AND
ENGINEERS*
SDS 394E. VISUALIZATION AND DATA ANALYSIS FOR SCIENTISTS AND ENGINEERS*
SDS 395: APPLIED MICROECONOMICS
SOC 384M SURVEY DESIGN & IMPLEMENTATION
STA 371G STATISTICS AND MODELING *
STA 380 10-MATH STATISTICS FOR APPLICS*
STA 380 7-FORECASTING*
STA 380 BAYESIAN ECONOMETRICS*

STA 380: APPLIED MULTIVARIATE METHODS*

APPROVED MINOR COURSES: Courses that cannot fulfill the major statistics elective requirement, but may be applied to the minor elective requirement. See Graduate Advisor for other minor options.

ASE 380P 1-ANALYTICAL METHODS I
ASE 387P 2-MISSION ANALYSIS AND DESIGN
AST 392D MATH METHODS IN ASTROPHYSICS
BIO 384K MATH/STAT MODELING IN BIOLOGY
BME 380J 5-BIOSTAT/STUDY DSGN/RSCH METH
C E 395R 4-METRICS
C E 395R 6-QUANTATV METHS FOR PROJ ANLY
E E 390C STAT METH IN ENGR & QUAL ASSUR
EDP 380C 8-DATA ANALYSIS USING SAS

EDP 382K ADVANCED STATISTICAL MODELING

EDP 384 8-QUALITATIVE RESEARCH METHODS
GOV 385 ADVANCED STATISTICAL ANALYSIS
GOV 385L BAYESIAN STATISTICS
LIN 386M INTRODUCTION TO COMPUTATIONAL LINGUISTICS
MKT 397 4-MARKETING RESEARCH METHODS
P A 397G ANLY METHS FOR GLOBAL POL STDS

PGS 383Q STATS IN TRANSLATIONAL SCI	
PHY 385L STATISTICAL MECHANICS	
PHY 385S SMNR STAT PHY: STATISTCL MECHS	
PSY 384M ADV STATISTICS: INFERENTIAL	
PSY 394T ADVANCED APPLIED STATISTICS I	
PSY 394T ADVANCED APPLIED STATISTICS II	
S W 388R 2-RESEARCH METHODS II	
S W 388R 3-RESEARCH METHODS III	
SOC 385L SOCL STAT: LIN MOD/STRC EQ SYS	
SOC 388L HISTORICAL AND COMPARATV METHS	
SOC 388M INTEGRATING QUAL & QUANT METHS	
STA 287 BUSN ANALYTICS & DECIS MODLNG	

Courses that faculty have indicated overlap significantly with core courses and cannot be applied to the degree

B A 386T STATISTICS BIO 384K APPL STAT FOR ECOLOGY AND EVOL EDP 381P QUANT RSCH DESIGN AND ANALYSIS **EDP 380E 1-FUNDAMENTAL STATISTICS** EDP 382K 2-CORRELATN & REGRESSION METH EDP 482K 1-EXPER DESIGN AND STAT INFER EE 381J. PROBABILITY AND STOCHASTIC PROCESSES I M 385C, D THEORY OF PROBABILITY **ORI 390R 1-APPLIED PROBABILITY ORI 390R 10-STAT DESIGN FOR EXPERIMENTS ORI 390R 2-MATHEMATICAL STATISTICS ORI 390R 6-REGRESSN & ANLY OF VARIANCE** PHR 390K EXP DSGN/RSCH METH IN PHR ADM PSY 384K. ADVANCED STATISTICS: EXPERIMENTAL DESIGN S W 388R 6-DATA ANALYSIS & COMPUTERS I S W 388R 6-DATA ANALYSIS & COMPUTERS II SOC 384L. SOCIAL STATISTICS: BASIC CONCEPTS AND METHODS SDS 380C.STATISTICAL METHODS I SDS 381. MATHEMATICAL METHODS FOR STATISTICS ANALYSIS SDS 382. INTRODUCTION TO PROBABILITY AND STATISTICS SDS 385: TOPIC 1: EXPERIMENTAL DESIGN SDS 385: TOPIC 2: APPLIED REGRESSION SDS 393C .: NUMERICAL ANALYSIS: LINEAR ALGEBRA