Colorado State University

STATISTICS MINOR

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Program Coordinator: Katy Jackson | 102 Statistics | Phone: (970) 491-6546 | Email: jackson@stat.colostate.edu

GRADUATION REQUIREMENTS **21 credits minimum**

Total REQUIRED Credits .....[9-10]

Total ELECTIVE Credits ..... [11-12]

***NOTE**: Students with previous R programming experience may waive STAT 158 with permission from a statistics advisor.

A **MINIMUM** grade of C must be obtained in ALL courses.

GROUP A: Introductory Course (Select one) **[3]**

- — STAT 301 Intro to Statistical Methods [3]
- — STAT/ ERHS 307 Introduction to Biostatistics [3]
- — STAT 315 Statistics for Engineers and Scientists [3]
- — STAT 201 or 204 AND STAT 302 [4]

GROUP B: Core Courses (Must take **ALL** courses) **[7]**

- — STAT 158 Programming in R (S) [1]
- — STAT 341 Data Analysis I (F) [3]
- — STAT 342 Data Analysis II (S) [3]

Electives: **[12]**

- — See lists below and to the right, select at least 6 credits from the list of statistics and data science electives and up to 6 credits from the list of approved outside electives.

STATISTICS AND DATA SCIENCE ELECTIVES: **[6]**
Select at least 6 credits from the following:

- — STAT 305 Sampling Techniques (F) [3]
- — STAT 331 Intermediate Applied Statistical Methods (F) [3]
- — STAT 400 Statistical Computing (F) [3]
- — STAT 420 Probability & Mathematical Statistics I (F) [3]
- — STAT 421 Introduction to Stochastic Processes (S) [3]
- — STAT 430 Probability & Mathematical Statistics II (S) [3]
- — STAT 440 Bayesian Data Analysis (S) [3]
- — STAT 460 Applied Multivariate Analysis (S) [3]
- — STAT 472 Consulting and Research [3]
- — DSCI 235 Data Wrangling (S) [2]
- — DSCI 320 Optimization Methods in Data Science (F) [3]
- — DSCI 335 Inferential Reasoning in Data Analysis (S) [3]
- — DSCI 336 Data Graphics and Visualization (S) [1]
- — DSCI 369 Linear Algebra for Data Science (S) [4]
- — DSCI 445 Statistical Machine Learning (F) [3]
- — DSCI 473 Introduction to Geometric Data Analysis (F) [3]
- — DSCI 475 Topological Data Analysis (S) [3]

ELECTIVE COURSES -- This is not meant to be an all-inclusive listing of elective courses. The electives shown below represent a portion of those courses at the 300-400 level that are offered by other departments and that are acceptable in meeting the minor in Statistics. Contact the Statistics Department advisor to inquire about pre-approving other courses.

APPROVED OUTSIDE ELECTIVES: **[6]**
Select up to 6 credits from the following:

- — BIOM 422 Kinetics of Biomolecular and Cellular Systems (S) [3]
- — BIOM 431 Biomedical Signal and Image Processing (S) [3]
- — BZ 346 Population and Evolutionary Genetics (F) [3]
- — BZ 350 Molecular and General Genetics [4]
- — BZ 360 Bioinformatics and Genomics (S) [3]
- — CIS 370 Business Analytics [3]
- — CS 220 Discrete Structures and their Applications [4]
- — CS 320 Algorithms – Theory and Practice [3]
- — CS 420 Introduction to Analysis of Algorithms (F) [4]
- — ECE 303 Introduction to Communications Principles (S) [3]
- — ECE 311 Linear System Analysis I (F) [3]
- — ECE 312 Linear System Analysis II (S) [3]
- — ECON 335 Intro to Econometrics [3]
- — ECON 435 Economic Forecasting (S, even years) [3]
- — ERHS 332 Principles of Epidemiology (S) [3]
- — ERHS 430 Human Disease and the Environment (S) [3]
- — ESS 330 Quantitative Reasoning for Ecosystem Science (S) [3]
- — F 321 Forest Biometry (F) [3]
- — F 422 Quantitative Methods in Forest Management (F) [3]
- — FIN 430 Introduction to Financial Modeling (F) [3]
- — FW 370 Design of Fish/Wildlife Projects [3]
- — FW 401 Fishery Science (F) [3]
- — FW 471 Wildlife Data Collection and Analysis [4]
- — FW 475 Conservation Decision Making (S, odd years) [3]
- — HDFS 350 Applied Research Methods [3]
- — MATH 229 Matrices and Linear Eqautions3 [2]
- — MATH 331 Introduction to Mathematical Modeling (F) [3]
- — MATH 340 Introduction to Ordinary Differential Equations [4]
- — MATH 369 Linear Algebra [3]
- — MATH 450 Intro to Numerical Analysis I (F) [3]
- — MECH 231 Engineering Experimentation [3]
- — MECH 417 Control Systems (F) [3]
- — MGT 475 Int'l Business Management [3]
- — MKT 450 Marketing Analytics (S) [3]
- — NR 421 Natural Resources Sampling (S) [3]
- — NR 422 CIS Applications in Natural Resource Management (S) [4]
- — PSY 317 Social Psychology Lab [2]
- — PSY 350 Research Design and Analysis II (F) [3]
- — PSY 370 Psychological Measurement/Testing [3]
- — PSY 371 Psychological Measurement/Testing Lab [1]
- — SOC 314 Sociological Approaches to Quantitative Data (F) [3]
- — SOCR 514 Agricultural Experimental Design (S) [4]