



DATA SCIENCE
COLORADO STATE UNIVERSITY

Data Science Minors (Modified 5/2023)

Welcome to the Data Science Program! Data Science refers to the discovery of knowledge and insight through the analysis of data. It draws on computer science, mathematics, and statistics. Data Science has emerged as a separate field in response to the avalanche of data from web-enabled sensors and instrumentations, mobile devices, web transactions, and the availability of computing power for data storage and analysis. Modern data is challenging not only due to its large scale, but also because it is increasingly heterogeneous and unstructured. Information gleaned from this data is revolutionizing diverse areas from health policy to high-energy physics.

If you are interested in one of our minors, we encourage you to make an appointment with the Data Science Advisor to learn more and discuss requirements and resources available to Data Science students. See the Data Science advising webpage for scheduling instructions: <https://datascience.colostate.edu/study-data-science/data-science-advising/>



Option 1: Minor in Data Science

Learning Outcomes:

- Students will be able to determine the appropriate method to apply to a given data science problem.
- Students will be able to prepare data drawn from disparate sources in to a form suitable for analysis.
- Students will be able to perform basic data science algorithms.
- Students will be able to interpret and present the results.

Requirements:

- CS 201/PHIL 201 [3]
- CS 220 [4]
- CS 345 or DSCI 445 [3]
- DSCI 235 [2]
- DSCI 369 [4]
- STAT 158 [1]
- STAT 341 [3]
- One from STAT 301, 302A, 307, or 315 [1-3]
- Minor Electives (select a minimum of 3 credit from the list below):
 - CS 320 [3]
 - CS 435 [4]
 - CS 440 [4]
 - CS 445 [4]
 - DSCI 320 [3]
 - DSCI 335 [3]
 - DSCI 473 [2]
 - DSCI 475 [2]
 - STAT 342 [3]
 - STAT 440 [3]
 - STAT 460 [3]

**Minor elective credit must be unique to the minor (cannot double count for any other major requirement)*



Option 2: Minor in Applied Data Science

Learning Outcomes:

- Students will be able to perform essential data handling practices in python and R.
- Students will be to identify basic mathematical and statistical concepts underpinning modern data science.
- Students will be able to perform basic analyses using modern data science software.
- Students will be able to interpret and present the results in the context of their major course of study.

Requirements:

- CS 152 [2]
- DSCI 335 [3]
- DSCI 369 [4]
- STAT 158 [1]
- STAT 301, 307, or 315 [3]
- STAT 341 or STAT 331 [3]
- Electives (select a minimum of 6 credits from the list below):
 - AREC/ECON 335 [3]
 - BZ 350 [4]
 - BZ 425 [3]
 - ERHS 332 [3]
 - ERHS 430 [3]
 - ESS 330 [3]
 - F 321 [3]
 - FW 370 [3]
 - FW 401 [3]
 - FW 455 [3]
 - FW 469 [3]
 - FW 475 [3]
 - GEOL 475 [4]
 - HDFS 350 [3]
 - MKT 410 [3]
 - PSY 250 [3]
 - PSY 350 [3]
 - RS 432 [2]
 - SOWK 300 [3]
 - WR 416 [3]