Undergraduate Certificate in **Data Science**

OVERVIEW

This certificate is designed to provide exposure to the three major pedagogical categories within data science: understanding of the theoretical underpinnings; computational method design, development and use; and domain-specific applications. It is expected that a student obtains specialization in one of these three areas through their choice of electives.

Mathematical prerequisite: Calculus sequence (e.g., (MATH 1210, 1220, *and* 2210) **OR** (MATH 1310 *and* 1320))

Required Courses (22-3 hours)
MATH 2270 Linear Algebra (4)
MATH 3070 Applied Statistics I (4) **OR** **CS 3130 / ECE 3530** Engineering Probability and Statistics (3)
COMP 1010 Programming for All I (3)
COMP 1020 Programming for All II (3)
DS 2500 Data Wrangling (3)
DS 3390 Ethics of Data Science (3)
CS 3190 Foundations of Data Analysis (3) **OR** **MATH 4100 / COMP 5360** Introduction to Data Science (3)

NOTE: (CS 1400 and CS 1410) or CS 1420 **can be substituted for both** COMP 1010 and COMP 1020. **If CS 1420 is used, an additional 3 credits among the Application Electives is required.**

Applications Electives (minimum of 3 hours required)

These courses should expose students to scientific, engineering, or societal topics which are dependent on "data" (broadly defined) and its interpretation. These will provide students exposure to subject specific data and how it is analyzed or otherwise used within the discipline.

Full list of pre-approved courses is here:
https://www.cs.utah.edu/wp-content/uploads/2021/11/DS-Data-Domain-Electives_11.23.21.pdf

To propose using a course not pre-approved, fill out this form: https://utah.sjc1.qualtrics.com/jfe/form/SV_0jmPe0Cn28gg1r8