

# GRADUATE CERTIFICATE IN DATA ENGINEERING

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The certificate program provides education on both Theoretical Foundation (TF) of Data Engineering and Applications (AP) of Data Engineering in specific engineering domains. The certificate requires completing 12 credits of coursework. At least 6 credits must be taken from courses listed under the Theoretical Foundation (TF) category. These courses provide training on the central theory and methods of Data Engineering, informed by physical and dynamical models that generally arise in engineering processes. At least 3 credits must be taken from courses listed under the Applications (AP) category. These courses provide training on applications of Data Engineering methods in specific engineering domains, by tailoring and applying data analysis to specific data acquisition techniques and models that are suitable for a particular engineering domain. The domains currently include Signal and Image Processing, Biomedical Engineering, Computer Engineering, and Systems Engineering.

Students interested in graduate work should refer to CSU's Graduate and Professional Bulletin (<http://catalog.colostate.edu/general-catalog/graduate-bulletin/>).

## Learning Objectives

Students will:

1. Think critically about Data Engineering.
2. Communicate effectively both with technical experts in their field and with experts from related fields who do not have a specific background in Data Engineering.
3. Assimilate advanced knowledge from disciplines of science and engineering to broaden their expertise in Data Engineering.