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## FOUNDATIONS OF DATA SCIENCE

The Foundations of Data Science certificate program provides students with a solid math, programming and algorithmic foundation in Data Science. Students will understand the key statistical theory that underlies data science, as well as become proficient in using both R and Python, two key programming languages used by data scientists. For students with a strong programming background they will study how to communicate critical ideas through data. The Foundations in Data Science course then ties these key skills with the fundamental algorithms related to machine learning in data science. This certificate can be a strong standalone certificate or can provide the foundational knowledge upon which to earn either the Data Analytics or the Core Technologies of Data Sciences and Data Analytics certificates.

| Code                        | Title                                | Credit<br>Hours |
|-----------------------------|--------------------------------------|-----------------|
| Select one of the following |                                      | 4               |
| COMM-601                    | Communicating about Data             |                 |
| or CS-601                   | Programming Methods for Data Science |                 |
| CS-641                      | Foundations of Data Science          | 4               |
| MATH-630                    | Statistical Methods for Data Science | 4               |