

DATA SCIENCE, CERTIFICATE OF ACHIEVEMENT

| Course | Title | Units |
|--------------------|-----------------------------------|--------------|
| ICS C290 | Data Science and Machine Learning | 3 |
| Total Units | | 31-32 |

Banner Code: 3_CT_DTSC

Control Number: 41082

Financial Aid Eligible

The Certificate of Achievement in Data Science provides students with foundational skills in data science, statistical methods, programming, and data visualization. Designed for students aiming to enter the workforce or transfer to a four-year degree program, this curriculum covers essential data science tools and techniques and applies them across various industries. By completing this program, students will acquire practical, hands-on experience with real-world data, empowering them to make data-driven decisions and solve complex problems. This program prepares students for entry-level roles or supports career growth in positions such as Associate Data Scientist, Junior Data Scientist, Modeling and Simulation Specialist, Modeling and Simulation Analyst, Big Data Analyst, and Senior Data Analyst.

Program Level Student Learning Outcomes

Upon completion of this program, students will be able to:

1. Recommend solutions to operational problems by applying data science methods, techniques, and applications.
2. Explain data extraction and cleaning techniques applied to a variety of data sources and data types to ensure quality.
3. Apply appropriate predictive analytics techniques to common operational scenarios.
4. Communicate complex datasets and findings by applying appropriate data visualization techniques.

Review Graduation Requirements (<https://catalog.cccd.edu/coastline/graduation-requirements/certificates/#achievementtext>).

| Course | Title | Units |
|--------------------------------|---|-------|
| Required Core | | |
| Select one of the following: | | 4-5 |
| MATH C140 | Business Calculus | |
| MATH C150 | Finite Mathematics With Applications | |
| STAT C1000 | Introduction to Statistics | |
| MATH C180 | Calculus 1 | |
| Complete all of the following: | | |
| ICS C123 | Fundamental Data Structures | 3 |
| CIS C157 | Introduction to Python Programming | 3 |
| ICS C165 | Foundations of Data Science and Artificial Intelligence | 3 |
| CIS C240 | SQL Database Development | 3 |
| CIS C250 | Introduction to Data Analytics | 3 |
| CIS C270 | Predictive Analytics | 3 |
| CIS C280 | Data Visualization | 3 |
| ICS C265 | Artificial Intelligence | 3 |