# Advance your career.

## DATA ANALYTICS CERTIFICATE
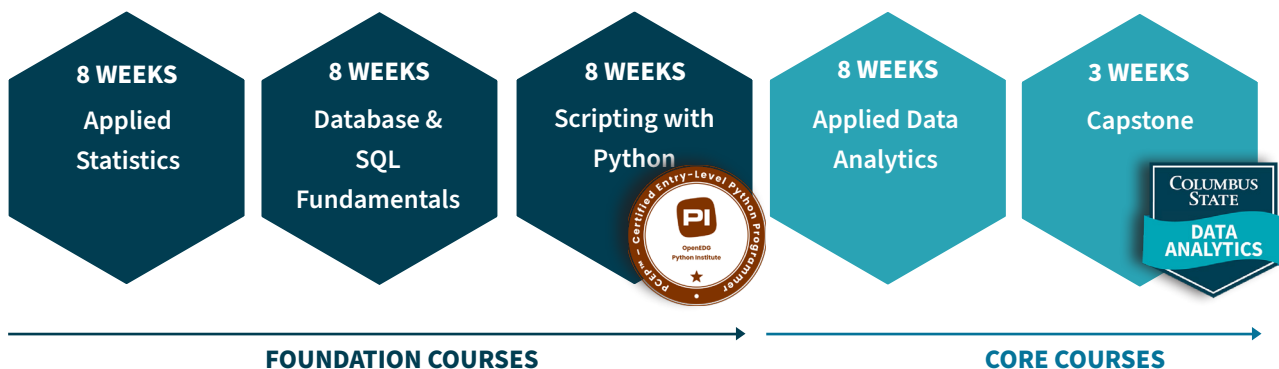
**Data analytics professionals combine qualitative and quantitative techniques to analyze, identify, and predict business trends.**

**What You'll Learn:**

This program is intended for individuals with little-to-no background in data analytics who are interested in developing the skills that can lead to a job in the area. The program, which Columbus State designed in partnership with Nationwide, begins with essentials in computer science, followed by coursework focused on data analytics in relevant business scenarios. This program will equip learners with practical, foundation-level skills in data analytics through a hands-on approach, taught by industry professionals.

Students benefit from a mix of online coursework and virtual real-time instruction. Students should expect to spend up to 10–15 hours per week on coursework, depending on the level of technology background. Students who successfully complete the Scripting with Python course are eligible to become certified by the Python Institute.

## Data Analytics Certificate



| 8 WEEKS | 8 WEEKS | 8 WEEKS | 8 WEEKS | 3 WEEKS |
|---|---|---|---|---|
| Applied Statistics | Database & SQL Fundamentals | Scripting with Python | Applied Data Analytics | Capstone |

**FOUNDATION COURSES**      **CORE COURSES**

## To learn more and register, visit: cscc.edu/it-certificates

# Data Analytics Certificate Courses

## Applied Statistics

This course introduces concepts of probability and statistics, including data types, graphs of qualitative and quantitative data, numerical summaries of data, concepts from probability, calculating probabilities of simple and compound events, and discrete random variables, including binomial random variables. In addition, students will work with continuous distributions, including the normal distribution, sampling distributions, confidence intervals, hypothesis tests, two-sample problems, and regression models. An emphasis will be placed on using statistical software when analyzing data through simulation, and then correlating results with the established methods, such as formulas and tables, as well as an interpretation of results.

## Database & SQL Fundamentals

This course introduces the student to the fundamental concepts and techniques of relational database technology, structured query language, database design, and database management. Students perform hands-on labs with commercial software and databases based on real-world scenarios.

## Scripting with Python

Students learn Python syntax and fundamental concepts such as functions, exception handling, and Python data types. Students write their own programs, learn conditional logic, loops, and sequences, and apply what they've learned in hands-on lab activities. This course provides students with an overview of fundamental programming concepts and Python programming skills in OpenEDG Python Institute's Certified Entry-Level Python Programmer (PCEP) exam. The course includes a voucher for the PCEP exam.

## Applied Data Analytics

This course will expose students to a typical analytics process, from preparing project requirements to presenting project findings in verbal, written, and visual form. To achieve this, students will use a combination of tools, including Python and Tableau, to collect data, clean data, explore and analyze data, build data models, and prepare data visualizations.

## Data Analytics Capstone

This Data Analytics Capstone is the culminating course where students will apply the knowledge and skills gained through the data analytics certificate program to realworld problems in the work environment. The course is based on a data analytics challenge, in which students evaluate and prepare a presentation with their analysis. The goal of the capstone is to give students the opportunity to make meaningful connections between their learning and the workplace.