Specialization

# Python

This specialization develops your Python skills from core fundamentals to real-world application, preparing you to meet growing industry demand and advance toward data science and machine learning roles. The Python specialization consists of three required courses.

**Total Units:** 6.5

**Learning Outcomes:**

- Develop proficiency in writing clear, efficient, and Pythonic code using core language features, standard libraries, and established style conventions.
- Apply procedural, functional, and object-oriented programming principles to build small- to medium-scale Python applications.
- Analyze and decompose complex programming problems into reusable program components using object-oriented design practices.
- Gain hands-on experience with modern Python development tools and advanced language features, including event-driven programming and GUIs.

*Courses may have prerequisites; review the course page before enrolling. A checkmark indicates the course is typically offered during that term.**

## Required Courses

6.5 Units | 3 Courses

| COURSE NAME & NUMBER | UNITS | FALL | WINTER | SPRING | SUMMER |
|---|---|---|---|---|---|
| Python Programming for Beginners CMPR.X415 | 1.5 | ✓ | ✓ | ✓ | ✓ |
| Python: Object-Oriented Programming CMPR.X420 | 2.0 | ✓ | ✓ | ✓ | ✓ |
| Python for Programmers CMPR.X416 | 3.0 | ✓ | ✓ | ✓ | ✓ |

## Completion Review

Once all specialization requirements have been met and your final grades are posted, please access your Student Portal to enroll in the "Specialization in Python Completion Fee" to begin the review process. Please allow 4-6 weeks to receive your certificate.