PYTHON 360 CERTIFICATE

Program Description

Python is one of today's most popular programming languages, with versatile uses across fields such as data science, software development, machine learning, and AI. As you complete the Python 360 Certificate program, you will gain an end-to-end understanding of the language and its adaptability to different applications and complex challenges. Throughout the core courses of the program, you will design, code, test, visualize, analyze, and debug Python functions and programs. As you discover how to write in and use Python, you will also develop essential techniques that will help you become a successful programmer, analyst, or software engineer, regardless of which language you are using.

After completing your foundational courses, you will have the opportunity to choose two electives that align your personal areas of interest with applicable skills and frameworks in areas ranging from user-centered design, to statistics, to communication. Ultimately, you'll come away with not only the technical skills to grow your career in a technical field or function, but also with the exceptional problem-solving ability that will set you apart in any industry.

Key Takeaways

- Master the foundational concepts of programming in Python
- Design, code, and test Python functions that meet requirements
- Write custom functions and data classes in Python that can be stored for reuse
- Visualize, analyze, and debug running Python programs
- Use Jupyter Notebooks to integrate data analysis, visualization, and documentation
- Filter, integrate, and prepare data for analysis
- Employ coding best practices using the Matplotlib framework, Pandas, and NumPy
- Explore datasets with machine learning
- Relate concepts in human attention and perception to best practices in visualization
- Apply and interpret real-world data in statistical models to make predictions about new situations
- Write programs that connect to the web to download data and use web services
- Write a basic web-based application

What You'll Earn

- Python 360 Certificate from Cornell Ann S. Bowers College of Computing and Information Science
- 323-331 Professional Development Hours (32.3-33.1 CEUs)
- 0-10 Professional Development Units (PDUs) toward PMI recertification

Who Should Enroll

- Current and aspiring programmers, software developers, and engineers
- Computer and data scientists
- Scientists interested in learning programming
- Data analysts and business analysts
- Database managers
- Technical and systems analysts
- Business managers
- Technical and engineering leaders
- Professionals in any industry who need to communicate and interpret data

Who Should Enroll

10 months to complete the program.

How to Enroll

For more information and to enroll, please visit Python 360 Certificate (https://ecornell.cornell.edu/certificates/technology/python-360/).

For the best experience in this program it is strongly recommended to take these courses in the order that they appear. Students must be comfortable with pre-calculus, basic algebra, and tinkering with their computer.

Code	Title	Hours
Core Courses		
eCornell CIS551	Python Fundamentals	0
eCornell CIS552	User-Defined Functions in Python	0
eCornell CIS554	Controlling Program Flow	0
eCornell CIS555	Mastering Data Structures	0
eCornell CIS556	Auditing Datasets	0
eCornell CAC103	Developing Data Science Applications	0
eCornell CAC104	Creating Data Arrays and Tables in Python	0
eCornell CAC105	Organizing Data with Python	0
eCornell CAC106	Analyzing and Visualizing Data with Python	0
eCornell CAC107	Building Predictive Machine Learning Models	0
eCornell CTECH40	How to Write Programs That Work With Databases	0
eCornell CTECH404	How to Develop Web Interfaces With Online Protocols	0
eCornell CTECH40	How to Create Interactive Websites With HTML and CSS	0
Elective Courses		
eCornell CIS301	Human-Centered Design Essentials	0
eCornell CEEM573	Designing Slides for Live and Legacy Use	0
eCornell CEEM574	Strategizing for Audiences With Different Expertise	0
eCornell ILR511	Interpreting and Communicating Data	0
eCornell ILR512	Using Statistical Tests to Make Decisions	0