

# FIN551 Python Programming

**Level:** 5

**Credit Units:** 2.5 Credit Units

**Language:** ENGLISH

**Presentation Pattern:** EVERY SEMESTER

## Synopsis:

FIN551 Python Programming introduces the use of Python programming from the perspective of a finance practitioner. With the growing importance of data in the new economy, finance practitioners are expected to be able to handle, organise and analyse large amounts of data. This skill is especially pertinent now, due to the rapid adoption of technological tools for process automation, investment decision-making and optimization in finance.

In this course, students are introduced to Python programming where basic programming and datahandling concepts are covered through the extensive use of in-class demonstrations and hands-on practice. Students will work on practical business/financial problems regarding process automation and trading/investing strategy back-testing, so that they can translate business requirements into Python code for implementation and deployment.

## Topics:

- Introduction to Python
- Introduction to Python IDEs such as Spyder, Jupyter Notebook
- Native data types in Python
- Native structured data types in Python
- Data representation
- Control sequences
- User defined functions
- Exception handling
- Introduction to Python modules – numpy and matplotlib
- Remote data sources – alpha vantage
- Best programming practices
- Documentation using inline comments and Markdown

## Learning Outcome:

- Appraise the usage of different data types and operations available in Python
- Design logic and program flow using control sequences
- Assemble and use available Python modules for rapid prototyping and development
- Propose implementation strategies for a business problem in Python
- Create appropriate documentation for source code management and apply best coding practices to construct technical specifications in Python

## Assessment Strategies (Evening Class):

Components	Description	Weightage Allocation (%)
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Overall Continuous Assessment	PARTICIPATION 1	10
	GROUP BASED ASSIGNMENT 1	40
Overall Examinable Components	ECA	50
<b>Total</b>		<b>100</b>