

AI 853 Advanced Programming in Python (3. 0)

Pre-requisite: None

Recommended Books:

1. Advanced Python Programming: The Insider Guide to Advanced Python Programming Systems, Richard Ozer, Python Programming, CreateSpace Independent Publishing Platform, 2017.
2. Introduction to Machine Learning with Python: A Guide for Data Scientists 1st Edition, Andreas C. Müller, Sarah Guido, 2016.
3. Fluent Python: Clear, Concise, and Effective Programming 1st Edition, LucianoRamalho, 2015

Credit Hours: 3

Course Objectives:

- To be able to add enhancements to classes.
- To implement and run unit tests.
- To create multi-threaded and multi-process applications.

Topics / Contents	Allocated Periods
The topics include Advanced List Comprehensions, Collections Module, Mapping and Filtering, Lambda Functions, Advanced Sorting, Unpacking Sequences in Function, Calls, Modules and Packages, Working with Data, Databases, CSV, Getting Data from the Web, HTML, XML, JSON, Testing and Debugging, Creating Simulations, Testing for Performance, The unittest Module, Classes and Objects, Creating Classes, Attributes, Methods and Properties, Extending Classes, Documenting Classes, Static, Class, Abstract Methods, Decorator.	45