

KF Python-Course

Welcome to the KF Python Course

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Introduction

Beginner's programming course covering the fundamental logic of programming, the tools that Python offers for scientists, and some special topics of importance regarding efficiency, an advanced understanding of Python, and current topics in programming.

Course Contents

Programming Foundations(~1 Month)

- [Chapter 1: Introduction](#)
- [Chapter 2: Variables, Built-in Functions & Operators](#)
- [Chapter 3: Strings](#)
- [Chapter 4: List & Tuples](#)
- [Chapter 5: Dictionaries & Sets](#)
- [Chapter 6: Conditionals](#)
- [Chapter 7: Loops](#)
- [Chapter 8: Functions & Recursions](#)
- [Exam 1](#)

Python Tools and Scientific Libraries(~1 Month)

- [Chapter 9: File I/O](#)
- [Chapter 10: Object-Oriented Programming](#)
- [Chapter 11: Exception Handling](#)
- [Chapter 12: Matplotlib-Graph Plotting](#)
- [Chapter 13: Pandas-Data Science](#)
- [Chapter 14: Numpy & Scipy-Numerical Computing](#)
- [Exam 2](#)

Special Topics(~1 Month)

- [Chapter 15: Regular Expressions](#)

- [Chapter 16: Avanced Python](#)
- [Chapter 17: AI Tools & Programming](#)
- [Chapter 18: Introduction to Data Structures & Algorithms](#)
- [Chapter 19: Concurrency and Parallelism](#)
- [Chapter 20: Student Choice](#)
- Final Exam

Student Choice

- Machine Learning in Python
- ChemInformatics in Python
- Web Development in Python
- Computational Photography in Python
- Something else ?

Problem Sets

There is a problem set every week. It is given on Thursday, with a deadline the following Thursday.

Exams

Three exams, one after each module ends.

Grading

25% each exam, 20 % Problem Sets, 5% Student engagement

External Material

- [Python Tutorial - W3 School](#)
- [Python Tutorial - Geeks for Geeks](#)
- [\(Youtube\)Python Tutorial for Beginners - Corey Schafer](#)
- [\(Youtube\)4h Python - Full Course for Beginners](#)