**PhD Physics course at Bari University ( Cycle)**

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| **Title** | Programming with Python for Data Science |
| **Proponent** | Dott. Domenico Diacono |
| **# CFU****(1 CFU = 8 hours)** | 3 |
| **Schedule** |  |
| **Brief Summary of the course** | This entry level course doesn’t require a previous Python knowledge. It contains an introduction to Python fundamentals, and to the most used Python structures for procedural and object oriented programming.A special attention will be given to the libraries that are required for a successful data analysis: NumPy, Pandas, Matplotlib, Seaborn. The course will be held in Italian, the material will be in English. |
| **Programme** | -Python installation: Anaconda-Built in types, list and dictionaries-Conditionals, Loops and comprehensions-Definition of function and modules-Scripts, interaction with files, Error trapping-Modules and namespaces-Numpy-Pandas-Matplotlib / seaborn-How to use the data libraries: an example of machine learning-Exercises |
| **Recommended texts** | **Imparare Python,** Mark Lutz, O'Reilly |
| **Assessment methods** | Multiple choice test, class interaction |