

*Title:* **Use of Python Programming Tools in Physical Chemistry Laboratories**

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Nowadays, the students in the course "Laboratori Basic de Química Física" have a laboratory guide which, alongside the recommended bibliography and the teachers help, must lead them into the understanding of some concepts on each practice while guides them to a correct execution on the experimental procedure proposed. Although the given resources are helpful, some fundamentals on these practices can sometimes be hard to understand and this could lead to confusion in some students.

On the other hand, during the first year of university, the students of the grade participate in a course named "Recursos Informàtics". During this subject, the students are taught in the use of some computer science tools which can be useful during all their studies and even during their professional career. These tools allow the student to do graphical representations and data treatment among other stuff. Nevertheless, this aptitude that has been developed is not always used in other fields such as the laboratories.

The main goal of this study is *developing software* that can help the students of the laboratory to understand the physical chemistry concepts behind the practices they do. This tool also has to help them to see which data treatment has to be done and the reasons behind choosing this one while showing the students that, applying the knowledge they got in "Recursos informàtics", it is quite easy to accelerate this process.

The chosen tool is the *notebooks* hosted on the Google Colaboratory platform. This tool is based in the python programming language taught in "Recursos informàtics". This tool creates what appears as an interactive website where the student will have text and images explaining the basis of the practices and helping them to learn them and, simultaneously, allows them to do the data treatment on their data.

**Keywords:** Physical chemistry, Software, Development, Notebook