

BIOENG-601

Python Bootcamp

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| Cursus | Sem. | Type |
|--|------|------|
| Biotechnology and Bioengineering | | Opt. |
| Computational and Quantitative Biology | | Opt. |

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|----------------------------|-----------|
| Language of teaching | English |
| Credits | 2 |
| Session | |
| Exam | Multiple |
| Workload | 60h |
| Hours | 40 |
| Courses | 20 |
| Exercises | 20 |
| Number of positions | 25 |

Frequency

Every year

Summary

An intensive, hands-on, pragmatic introduction to computer programming. Students learn basic concepts like data types, control structures, string processing, functions, input/output. They perform simulations, write scripts, and analyze and plot biological data. Python is the language of instruction.

Content

Greetings doctoral students and postdoctoral fellows in the biological sciences! Addressing the big questions in biology increasingly requires help from computers. We are therefore excited to offer a Caltech course for graduate students, BE/Bi/NB 203: Introduction to Programming for the Biological Sciences Bootcamp - for the third time at EPFL!

Our aim is to bring you up to speed with programming skills that you can immediately put to use in your research.

Because intensive, hands on training is a great way to learn practical skills efficiently, we are offering this course as a weeklong summer bootcamp. All you need to bring is yourself, your laptop, and a power supply. A typical day in the bootcamp is as follows:

8-noon (with 15 minute break in the middle): Hands-on instruction

noon-1: Lunch with research talk from EPFL faculty highlighting use of computation in biology

1-6 (with a 15 minute break in the middle): Hands-on instruction followed by exercise session

You can check out the Caltech version of the bootcamp here: <http://justinbois.github.io/bootcamp/>

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This course is for biology Postdocs, PhD, and Master students who want to use Python programming in their work.

Requirements: Students should bring their own laptop for Python installation.

Minimum 10 participants

Maximum 25 participants

Note

A few spots will also be open to Master & Bachelor-6 students. If you are interested, please kindly contact me directly via email to register.

Please however keep in mind that you risk having to renounce taking the Python bootcamp should your exam dates fall during the same week. EPFL requires that you remain flexible during the whole exam period in case of any last-minute exam scheduling changes.

Keywords

Python Bootcamp

Learning Outcomes

By the end of the course, the student must be able to:

- Use python to analyze biological datasets

Resources

Websites

- <http://justinbois.github.io/bootcamp/>