Bioinformatics

The students perspective

Students' point of view
Three surveys:

1) Studying Bioinformatics

2) Bioinformatics training
   To computer scientists

3) What is Bioinformatics?
   To wet-lab biologists
Participants gender

Studying Bioinformatics

- Male: 58.3%
- Female: 41.7%

Bioinformatics training

- Male: 55.2%
- Female: 34.8%

What is Bioinformatics

- Male: 77.5%
- Female: 22.5%
Participants occupation

Studying Bioinformatics

Bioinformatics training

What is Bioinformatics

High School Student 16.3%
Bachelor Student 59%
Graduated Student 14%
Phd Student 16.3%
Post Doc 33.3%
Other 9.7%

Students' point of view
How a Bioinformatics course should be done, according to students.

1) Do you think that the following exams should be part of a bachelor/master degree in Bioinformatics? (1 to 5)

- Molecular Biology
- Evolutionary Biology
- Biotechnology
- Agriculture
- Medicine
- Informatics
- Biophysics
- Engineering
- Chemistry

... and they suggested:

2) To become a great bioinformatician, do you recommend.. (1 to 5)

.. to enroll in a very specific course of studies

.. to do long internships

.. to go abroad for a semester

.. to do the thesis (or final project) abroad

.. to work in a society/industry

.. to apply for a PHD position

... and they suggested:
“Learn how to explain the importance of your work”, “Have many and short internships”, “check online resources”
3) My advice to a Bioinformatics candidate is...

Correct your sitting posture

Run.

Master both aspects of bioinformatics!

Know the basics of all. Study the details of many. Master some.

Start with a python/r

to go for internships with supportive young members (phd, postdocs) to get hands on the programming and analysis tasks. Theory is good, but applications (in bioinformatics) is more relevant.

Take computer class
to be open to new ideas and try other (less conventional) methods

Choose the topics that interests you before choosing "which bioinformatics" you want to do.

Students' point of view
Assess the level of satisfaction of Bioinformatics students as regards their studies

68 different Universities, 5 of which Italian (Bologna, Padova, Milano, Roma, Trento)

When I selected seminars I meant coursera.org
Bioinformatics training

1) How much are you satisfied of your preparation in bioinformatics?
2) How do you evaluate your academic education for a career as a bioinformatician?
3) How much do you consider your degree related to Bioinformatics topics?
4) How much do you consider appropriate the basic tools you have learned during your academic degree for a bioinformatics career?

Almost 40% score 4, 20% score 5 and few scores 1,2,3
However...

5) Do you think that training courses and post-graduate training are necessary for a career as bioinformatician?

6) Do you feel as you need more specific and advanced courses during university?
What is Bioinformatics?

Understand the awareness of Bioinformatics among wet-lab biologist and people interested in Biology.

1) Bioinformatics is..

A multidisciplinary field of science

More theoretical than practical
What is Bioinformatics?

2) Bioinformatics has to do with...

RNA, genes, proteins

Human diseases and medical issues

Agriculture and breeding

Machine learning
What is Bioinformatics?

3) A Bioinformatician is...

A technician that solves technical problems in the lab
A computer expert
A biomedical engineer
A biologist that knows how to use specific softwares

4) They only will become good bioinformaticians:

Informaticians

Biologist and biotechnologist

Students' point of view
What is Bioinformatics?

At my university, Bioinformatics course was a little bit too theoretical. I would like if there is more practical and more real problem-solving exercise.

is a quite difficult science for how has a biology background but helps in all kind of analysis and is the base for the future

I like bioinformatics, but in Italy there's not a lot of good master to prepare students to this work.

My master degree course (Molecular Biology, Italian University, graduated in 2014) did not take too much consideration in Bioinformatics, just some lectures. My opinion is to prepare more university courses for understanding better the bioinformatics field in research projects.

Bioinformatics is mandatory in a research lab, and a bioinformatician is a nodal job position. But it is also essential for all biologists and biotech to understand a little bit of bioinformatics.

Tutti gli studenti di biologia e biotecnologie dovrebbero avere bioinformatica nel piano di studi.

Exasperating and very badly taught
Its a good initiative as to bring forth different professions together on this platform.

This could be greatly helpful for Student Council and RSGs planning. Thanks for the initiative!

Nice job guys! Thats a good initiative :D

thanks so much

This survey is very helpful

Thank you