

Background:
previous degree

Languages
Homecountry



Why did I choose
biostatistics?

Survey questions (November 2016)



What I like about
the program:



What I don't like
about the program:



My advice to
future students

Background of current students

- About 40% mathematics or statistics
- About 40% biology or some type of biotechnology
- Others are/have been from psychology, economics, medical sciences, sports science, physics etc.

Home countries & Languages

- Students are/have been from Switzerland, China, USA, Greece, Egypt, Palestine, Italy, Spain, Syria, Germany, Venezuela, Australia, Turkey, Korea
- Common language of students is English, some speak German and/or French



Why did I choose biostatistics?

- Interest in health related research
- Develop alternative skills still related to biology
- Currently I am working in a hospital in Switzerland as a research fellow. My research projects cover two fields: experimental studies and clinical trials. In order to improve my knowledge in clinical trial design and data analysis, I chose to study biostatistics
- General interest in the quantitative aspects of Biology
- Job outlook
- To become a good natural scientist



Why did I choose biostatistics?

- Its the perfect program to do math but still have a connection to real world problems and it's not finance
- The most valuable gift in life is our health, and biostatistics is a very important tool in studying our health problems.
- Biostatistics is a fascinating field since you have to combine different disciplines in a productive and fruitful way. The fact that really makes Biostatistics unique for me is that in the end, biostatistics always has to do with improving health and the quality of life itself!
- I was interested in the medical application of statistics



Why did I choose biostatistics?

Three decades ago a firm understanding of statistics was not a necessity in understanding the molecular biology of the cell. However, recently it has been established that the cell is a universe on its own, and there is hardly a straight forward interaction within a human cell.

It became clear in order to really and fully understand or at least have a reliable assumption of what is going on inside our bodies we have to study enormous number of assay results produced by several sources and laboratories and their the correlation to each other. Account and correct for hundreds of factors many of which are correlated. Also, measurement errors have to be taken into consideration.

So, because of these reasons and many more, statistics is becoming indispensable for not only molecular biology, but for a lot of other fields as well. It might provide (does not always work) a method to model this data and predict the functions and the relationship between various genes and proteins.



Likes

- Flexible, applied
- Basic mathematics and statistics behind clinical data analysis, learning R, comprehensive introductions of clinical trial design and data analysis. Very kind classmates with multi-background, and very good professors.
- Focused on the relevant aspects, good lecturers, close connection between students and staff.
- Not a master just to have a masters degree but learning many new things and aspects.
- Many many interesting topics to choose from
- The learning curve is really steep
- One gets used to work with programs like LaTeX and of course R.



Likes

- Good organization and there is always an open ear for questions and other needs
- Only a few students, i.e. the familiar atmosphere
- The Journal Club, Consulting Project
- R programming
- I like its step-wise approach to address basic and complex statistical concepts through the core modules.
- The flexibility of the program when it comes to the diversity of the modules and the electives. You are more or less free to pursue whatever discipline in statistics you want.
- The constant availability of help and support from both the administration and the professors.
- Specialization.
- Not too many students.



Likes

- Very personable faculty, that give me the feeling that they are always willing to help.
- Well organized Program.
- Very, very interesting courses.
- The courses that have students from different academic backgrounds (Epidemiology and Clinical Biostatistics) have a very nice interactive structure that makes you work with people that understand each problem you are studying from a different point of view.
- Its a hands-on program that doesn't neglect the theoretical aspect of the methods used.
- Professors are very well qualified!
- Students with different backgrounds
- The professors have a wide range of interests so I can get different points of view. There is a range of applied topics and theory.



Dislikes

- Too flexible
- Some lectures are clearly meant for people with a strong mathematical background, very theoretical, and are therefore hard to follow for me.
- We have to finish 6 CP of non-statistics elective courses to finish the biostatistics program. It is difficult to find suitable courses because the courses on the master level from other departments are usually too advanced for us
- Maybe Bayesian statistics could also be covered as a mandatory part of the program.
- For now - I have to leave this field empty
- Different locations (Irchel and Hirschengraben)



Dislikes

- More modules that focus on the applications of statistics in various fields. For instance, there is the Introduction to Epidemiology course, in which different speakers come and talk about basic epidemiology concepts. How about a similar module in terms of the concept only, in which various statisticians come and talk about the contribution of statistics in their fields e.g, biology, environmental science, computer science, finance, etc... .
- I would like to have more project based type of examination or just a small contribution towards the final
- Homeworks.
- It's a challenging program, which I consider to be a good thing but I do not believe that its challenging „in a productive way“ 100% of the time. I feel that a little bit more guidance and less pressure about every week's "Exercises“ would provide the conditions for a student to study in a more productive and in-depth way.



Dislikes

- I think that if more examples were done in-class it would be really helpful for everyone!
- For each course it would be helpful if there was a list of recommended books about essential prerequisite knowledge.
- The core classes are stacked in a single semester. It would be nice if one of them was offered in the spring so that the first semester wasn't so intense.
- I wish that the classes were offered in one area of the campus so we'd have a more time to interact with other students.



Advice to future students

- Take classes in order they are meant to be taken.
- If needed, take a statistics class as a prerequisite class, not applied biostatistics or some other applied class.
- For non math related people I would strongly recommend to go through their stats courses so far and make sure they understand the basics.
- I suggest the prospective students should improve their backgrounds in mathematics and R, otherwise it is difficult to study most of the compulsory courses.
- Try to start with an open mind and don't get too intimidated in the beginning. Things will get clearer with some time and context.



Advice to future students

- If one is interested in statistical procedures addressing biological questions - the program has a good layout. One could see it as a headquarter and of course there is always the possibility to make an excursion and fill in gaps with lectures at ETH. So regarding the biological interest, the program has a good focus and extension is always possible. In the end it's about what you know and not where you got it from ;).
- Don't be afraid of the math, statistics is fun!
- Mainly to work hard on their Mathematical background (calculus, linear algebra) and also probability theory.
- Always practice R, programming is like a sport, the only way to get better is by constant training.



Advice to future students

- Be excited.
- 3 persons that I do not know personally have already contacted me asking about the program. My advice to them:
 - Apply NOW, its an amazing program in a very good University.
 - Study a lot from the beginning and you will be fine.
 - Many interesting courses so think a lot about your study plan from the beginning.
 - Everybody is really helpful so don't be afraid to reach out to them if you have any kind of a problem.
 - Enjoy it!
- Be prepared to work!