Date: Tue, 26 Feb 2008 16:42:02 -0800
From: "Kimmen Sjolander" <kimmen.sjolander@gmail.com>
To: "Rafael Palacios" <palacios@ece.unm.nm>
Subject: Re: Undergraduate Program in Genomic Sciences

Dear Rafael,

I'm travelling (in Europe), and had an NIH grant proposal due last
week, so I've been a bit swamped.

I hope you can accept this email as my review of your program, since I
won't be getting back to California until March 9.

I am very impressed with the thoughtful and decisions made in
developing this computational biology curricula. Your students are
outstanding. I wish we had this kind of curriculum here at Berkeley!

I recommend that the following be added:

A second statistics course, going into probabilistic/statistical
models (e.g., HMMs, support vector machines, etc.). In my opinion,
most students find statistics fairly un intuitive and difficult, and
it may not be until the second class before it starts to sink in.

I also encourage you to consider the inclusion of a significant
written and oral presentation component in at least two courses, with
a focus on written English. Becoming a skilled communicator in both
written and oral presentation, like acquiring an understanding of
statistics, can take some time to develop. But success in science
depends on the ability to communicate one's ideas effectively, so this
should start early in the program (say, in the first year). Since your
curriculum is already quite packed, it doesn't make sense to add
another course, but it may be possible to include a strong
writing/oral presentation component in a couple of courses.

Lastly, I would encourage you to require students to perform an
independent and significant software development project in at least
one course, so that they are forced to develop significant programming
skills. Some software engineering training (e.g., writing solid and
well-documented modular code, algorithm design, testing for
correctness, etc.) should be provided.

Your students are already outstanding, but these additional measures
should help to increase their ranking when they apply to competitive
PhD programs.

Best regards,

Kimmen