## SELF-ASSESSMENT OF USU CS COURSE
### BY INSTRUCTOR

### Course: CS 5670 Bioinformatics II  
### Semester: Spring 2007  
### Instructor: Minghui Jiang

<table>
<thead>
<tr>
<th>List Course OUTCOME</th>
<th>Assessment tool and passing criteria</th>
<th>% Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain knowledge on a variety of effective algorithmic techniques and mathematical methods of bioinformatics.</td>
<td>Classroom discussion.</td>
<td>100%</td>
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<tr>
<td>Be able to utilize different techniques and methods in solving various bioinformatics problems and compare their effectiveness.</td>
<td>Classroom discussion and exploratory assignments.</td>
<td>100%</td>
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<tr>
<td>Be able to use common bioinformatics tools such as BLAST and understand its underlying principles.</td>
<td>Exploratory assignments.</td>
<td>100%</td>
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<tr>
<td>Be prepared for research in bioinformatics.</td>
<td>Research project.</td>
<td>100%</td>
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**Self assessments of strengths and weaknesses this semester (what worked, what did not work):**

**What worked:**

1. Let students read research papers directly then discuss,
2. Individual exploratory assignments on bioinformatics tools such as Blast, T-Coffee, mfold, and Delta and on databases such as GenBank and PDB,
3. Advise Joel to enter the Technology Titans Challenge (he won the 2nd prize),
4. A half-semester-long group project on developing a new bioinformatics tool called uShuffle: [http://www.cs.usu.edu/~mjiang/ushuffle/](http://www.cs.usu.edu/~mjiang/ushuffle/) and the submission of a research paper "uShuffle: a useful tool for shuffling biological sequences while preserving the k-let counts" coauthored by the instructor and all students (the paper will likely appear in the conference BioComp'07 and the journal BMC Genomics.
5. Everybody sits in the front row, everybody writes on the board if needed, teamwork.

**What didn’t work:**

The class size is very small (only three students) so if there were any issues they were quickly discovered and corrected due to the very close interaction.

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**Recommendations of changes to implement next offering:**

Just keep doing the same thing if the class size is small (<= 5); for a larger class, divide the students into two competing groups.