## Appendix 5. Extra Credit Assignments

Student who wish to improve their grades on the first three exams may participate in extra credit:

The objectives for an extra credit project are:

1. to revisit/relearn material that was difficult and not adequately comprehended the first time around.
2. to demonstrate comprehension of the material unimpeded by the testing format (ie. multiple choice, short answer).
3. to prepare oneself for future exams, by identifying problems and solutions to one's approach to the testing format.
4. to improve one's grade for the course.

Extra credit projects will consist of the following parts:
Part 1. A critical evaluation (one half page, typewritten, double-spaced) of the difficulties encountered with the exam. Discuss which concepts were the most problematic (ie. "anything that required math or interpretation of a diagram," all questions regarding RNA transcription - "I just didn't get it/l missed those lectures and didn't understand the book", or all multiple choice questions - "it wasn't the concepts that got me; it was the way the questions were worded."

Part 2. Discuss how you prepared for the exam. Did you come to class, read the book? How did you study, for how long, how often, with whom? BE HONEST. You will be evaluated on your plan for improved performance, not for past mistakes. Discuss how you will modify your study habits to improve performance on the next exam. Be specific. Don't try to impress the instructor by saying that you will study for 5 hours a day. Instead, come up with a realistic plan that will work for you.

Part 3. Perform a question-by-question analysis for all of the points that were not earned on the exam. a) identify the correct answer, b) identify a key concept that the question is addressing i.e. "Do you know the difference between transcription and translation"? "Can you remember which molecular biologists made which key discoveries"? c) state why the answer you originally made was incorrect, and why you selected that answer. i.e."I selected transcription, because I confused the two concepts of transcription and translation." d) write one question in the same format (ie. multiple choice, short answer) and one question in a different format that would address the same key concept. Do not simply rewrite the same question.
summary of participation in extra credit:

| times extra credit utilized: | 0 | 1 | 2 | 3 |
| :--- | ---: | ---: | ---: | ---: |
| \# students: | 5 | 12 | 9 | 21 |
| \% class: | 11 | 25 | 19 | 45 |
| median of exam 1-3 scores: | 90.2 | 93.1 | 84.8 | 77.3 |
| range of exam 1-3 scores: | $75.5-96$ | $81.9-95.8$ | $52.6-89.1$ | $61.5-84.4$ |

