

# Molecular Biology 2018-2019

So, I hear that you are signed up for Molecular Biology/Biochemistry next year. This is an intense laboratory course which covers topics that are not usually addressed until junior/senior year – in college! This course is designed for those that are planning on studying biotechnology, biochemistry, or molecular biology at the next level. That being said, there will be extensive math and chemistry throughout the year, which you need to have some prerequisite knowledge of. **It is nothing like freshman year “Living Environment” biology.** If you have any questions about what the class is about, please check with me down in G82 before this school year finishes up. To be prepared as soon as we start in September, here are a few things that you need to do before classes start in the fall:

1. Send an e-mail to [jgoldberg.rpi@gmail.com](mailto:jgoldberg.rpi@gmail.com) **ASAP** with your name and **BOTH** your school e-mail address and a non-school e-mail address that you use so you can be added to the Mole Bio class list for updates throughout the summer and all through next year. **I need both because there have been issues with Chromebooks and my Gmail account...**
2. Expect a few assignments/video links e-mailed to you this summer.
  - a. The first is a comprehensive review of MATH SKILLS! It is a lengthy, *non-graded* (careful, that does not mean optional) assignment that will have you reviewing Unit Conversions, Exponents, Significant Figures, Making Molar Solutions, pH and Buffers, and analyzing Rates of Reaction. (You will get this around the 4<sup>th</sup> of July.) For this class, the math **must** be understood beforehand...
  - b. Then there will be a review of using Excel (or any other spreadsheet program – such as Google Drive, OpenOffice, Numbers) to properly make data tables, graphs, and charts. Knowing how to use a professional program to present data is an integral skill in science. Also, it will piggyback with the math assignment in using regression analysis (best fit curves) to analyze data. We don't have time to review computer skills once class starts! (You will get this in the middle of July.)
  - c. Finally, I will send you links throughout the summer to many appropriate topics including:
    - i. lab safety
    - ii. college-level chemistry reviews
    - iii. protocol descriptions/reviews
    - iv. molecular biology topic lessons
3. Check out [www.goldiesroom.org](http://www.goldiesroom.org): The Molecular Biology section is of primary concern to you, as I will have all the notes and projected labs for the year posted for you to read.
4. Again, ask some of the current students in Molecular Biology/Biochemistry about what to expect before summer gets here. What I have planned for next year is not for lightweights...



**J. Goldberg**

**Be prepared to release your INNER-NERD...which is a *good* thing!**