This Daily Update will be written as soon as possible after I finish teaching at 11:30. On many days, that could mean after kids go to bed. It is basically a log of what we did, for example, by listing the relevant page numbers in the notes, but will also will correct errors and make clarifications, and provide announcements.

Tuesday and Thursday September 3 and 5: Eric Canton substituted. Tuesday he gave a brief overview on what is commutative algebra. Thursday, students worked on a worksheet on Noetherian ring. You should complete this for homework, and keep your work organized in a ”Lab Notebook” that includes each worksheet with the date and your collaborators.

Assignment for Tuesday Sept 10’s class: Read through page 18 of Hochster’s Fall 2017 Math 614 notes (link provided on our Math 614 homepage). This includes an overview of what commutative algebra is about, and a review of the language of category theory, which will be a useful framework for us as well. [Note: Hochster’s class met for 50 minute increments, so about three Hochster lectures per week is our pace, although we won’t follow his course exactly.]

Tuesday September 10: Students did a great job going through the Worksheet on the Zariski Topology and the functor Spec. Most groups got through most of it. In writing up in your own words, the key problems to write up, at the very least, are 2, 4, 6ab, 7,11. These are the theoretical ”theorems” of the class—the other problems are great for building intuition so they are also important if you really want to master commutative algebra. I strongly encourage you to sit down after class while things are fresh and write up as much as you can or as much as you are interested in. Latex is great, but handwritten is fine. Hint: you can take pictures of your work on the board.

Assignment for Thursday Sept 12’s class: Read through page 28 of Hochster’s Fall 2017 Math 614 notes (link provided on our Math 614 homepage). Try to focus on concretely understanding free modules, Hom, and what is localization, which should be review from Math 593. However, he has a lot of categorical framework around it which might make it less familiar. Start looking at Problem Set 1, which is posted on the website. I will collect your solutions next Thursday.