Analysis II
Spring 2016

Professor: Dr. Heather A Moon
email: hamoon@smcm.edu   **phone:** 240.895.2197 (not the best way to contact me)
website: faculty.smcm.edu/hamoon
TA: Yingyi
Book:*Understanding Analysis* Abbot.

Our plan for this semester

Last semester we spent the whole time seeing how Analysis is pretty cool, but I promised you awesome. This semester is when it gets awesome. In this class, we will discuss our denoising application. By the end of the semester you should be able to

- Discuss the analysis of functions: Continuity, Differentiability, and Riemann Integrability.

- Discuss the analysis of metric spaces of functions: Compactness and convergence in function spaces

- Discuss the analysis of mappings defined on function spaces: in particular, something like derivatives of these maps.

- Discuss all the above in discrete settings as well.

- Discuss how all the above will help us denoise an image.

What do I expect from you?

My expectations haven't changed much from last semester. I expect you to want to learn. I expect you to keep an open mind about what we talk about. I expect you to do your own work. I expect you to collaborate with your classmates. I expect you to participate in class. I expect you to ask questions and to answer questions. I expect you to talk to the TA and to me about issues and class struggles. Really I expect you to learn. Finally, I expect you to know what we did last semester.

What can you expect me to do?

You can expect me to be enthusiastic about this subject. You can expect me to ask you questions. You can expect me to answer your questions by asking more questions. You can expect me to help you become a lifelong learner. That's really what I want to do for you in this class. You can also expect me to listen to your concerns and make adjustments to this syllabus if I feel it is best for you.

Classroom Expectations

Respect is important in a classroom to facilitate discussions. I expect that some of you will answer wrong at times. That's awesome and I welcome wrong answers. We can learn from them. I don't want people answering quickly. Give your classmates a chance to think about my questions. If you know the answer right away and you know it is correct, wait. Respect your classmates by letting them think. **If you think you know the answer, but are not sure, feel free to try sharing it.** (I boldfaced the last statement because some complained in my evaluations last semester about not being able to answer if you think you know the answer but aren't sure.) If it is wrong, we will use it to learn. Wrong answers are the best way to clear up misunderstandings and everyone can learn from them. Quick correct answers help nobody.

How will I measure my expectations?

I will give you a two in-class and 2 take-home exams this semester. Exams will amount to 50% of your grade. I will also give you homework (20%) and labs (20%). Finally, I will expect you to participate in class (10%). There will also be 3-4 "Must Get Correct" problems that you must pass in order to pass this class (no matter the rest of your grade).

What are "Must Get Correct" problems?

There will also be 3-4 "Must Get Correct" problems that you must pass in order to pass this class (no matter the rest of your grade). These problems are related to the class goals above. These problems verify to me that you are making progress in this class by learning accurate, clear, and logical steps for Analysis proof writing. These problems do not receive a letter grade. Rather, these problems are either correct or in correct. You have until the last day of class to get all of these correct. You may turn them in repeatedly, but if you turn one in twice and do not pass by the second time, I will not look at any more attempts without you talking to me or Yingyi about the issues and how to correct them.

Academic Dishonesty

Plagiarism and cheating are not tolerated in this class. I will ask you to do things that have already been done. Using someone else's work is considered both plagiarism and cheating. Do not look up answers online. Do not use the solutions you may find online. Do not copy your classmates' work. If you get help from me, you are not allowed to copy my work either–you have to reformulate what you learned in your own words. Receiving or giving help on an exam in any way is cheating. In our department we don't take lightly academic dishonesty. Our goal is to help you learn and academic dishonesty goes against our goal for you. If you are ever in doubt as to whether your actions may be violating the academic dishonesty policy, please ask me before submitting your work.

Accommodations

Any student with a disability requiring accommodations in this class is encouraged to contact me after class or during my office hours. Students with a disability may also wish to contact William Howard in the Office of Academic Services, Glendening Hall, suite 230, x4388.