

EMERGING SCHOLARS PROGRAM (ESP) WORKSHOP FOR MATH 215

Math 294 – Spring 2021

Tuesdays 9:00 - 10:50 AM or Tuesdays 12:00 - 1:50 PM

Instructor: Kevin Zhou

Zoom Link: To be distributed privately

Office Hours: Thursdays 10:00 AM - 12:00 PM (tentative) or by appointment, via Zoom

Course Website: math.uic.edu/~kzhou23/S21/294.html

Email: kzhou23@uic.edu

Optional textbook: *Mathematical Proofs: A Transition to Advanced Mathematics*, 4th ed, by Chartrand, Polimeni, and Zhang

A good supplemental text: *An Infinite Descent into Pure Mathematics*, by Clive Newstead (available online for free here: <https://infinitedescent.xyz/dl/infdesc.pdf>)

Description: This one credit-hour course is the Emerging Scholars Program (ESP) workshop associated with MATH 215 Introduction to Advanced Mathematics. The purpose of this workshop is to reinforce the ideas covered in MATH 215 and provide an opportunity for students to gain more practice with problem-solving. In particular, we will focus understanding what constitutes a mathematical proof and how to write effective proofs.

Throughout the course, we will be working on problems in groups during class time in order to help everyone actively engage with the material. Each week, we will discuss a new topic, and groups will be assigned a problem or problems to work on from that topic. Each group will be expected to have some form of write-up of a solution or attempts at a solution that I can give feedback on by the end of each class. If class time allows, we may incorporate groups giving short presentations on the solutions to their problems.

Online Zoom Classroom: The course will meet synchronously online via Zoom. The Zoom link will be distributed through a secure channel, and the same Zoom link will be used for all course activities (class time, office hours, and other meetings).

You are highly encouraged, but not required, to keep your camera on during class time.

I understand that it can be difficult to focus during online classes. Please try your best – I would recommend closing all non-essential applications on your computer and putting cell phones and other devices away during class. I would also recommend having pen and paper available during class time, since doing mathematics often requires a lot of scratch work.

Homework: There will be no assigned homework for this course. However, I will try to provide optional additional readings (usually from the textbook) and additional exercises for you to try in your own time if you would like additional practice.

Grading: This class is graded Satisfactory/Unsatisfactory (S/U). The only factors that affect your grade in this class are attendance and participation. Four or more unexcused absences will result in an Unsatisfactory grade. Since group work is key to this class, you are expected to show up on time to class. Arriving up to 20 minutes late will count for 1/3 of an absence, while arriving more than 20 minutes late will count as an absence.

Due to the circumstances of the COVID-19 pandemic, I am willing to be much more flexible about attendance. If there are any external circumstances that mean you will have to miss or be late to class, please let me know as soon as possible.

Absences can be made up by attending office hours. Attending two total hours of office hours will count for one absence. Please let me know if you wish to make up an absence at office hours so that I can keep track.

In addition to attendance, I reserve the right to assign an Unsatisfactory if you fails to participate significantly throughout the semester. This should not be an issue at all if you are reasonably participating in group work.

MATH 215 Enrollment: In order to take this course, you must be registered for a section of MATH 215. MATH 294 is meant to be a companion course to MATH 215, and students in ESP workshop have historically performed better in the associated course. However, this workshop is not a replacement for your MATH 215 lectures.

Syllabus Assignment: Please send me an email with subject line "Math 294 Syllabus Assignment" confirming that you have read through and understand the entirety of the syllabus.

In addition, please include in your email at least one sentence of your thoughts on Chapter 0 of the textbook (a PDF of chapter 0 will be sent for you to read). Feel free to write more than a sentence if you have more than one sentence's worth of thoughts!