

## 290. Undergraduate research in mathematics (Spring 2019)

**Instructor:** Ryan Hynd (rhynd@math.upenn.edu)

**Office:** 4N42

**Office Hours:** Tuesday 3:00 – 4:00pm

**Class times:** Tuesday and Thursday 1:30 – 3:00pm

**Class location:** DRL 4C2

**Description:** Students will do a research project on a topic of current interest in mathematics. Students will also write a report subject to revision and give two oral presentations on their work. The projects to be selected from are drawn from many areas of mathematics including dynamical systems, number theory, fluid mechanics, geometry, optimization and probability.

In the first few weeks, we will discuss how to do research, how to give a presentation and how to write a report. In the following weeks, we will meet as a class once per week to hear an oral presentation. On the days that we do not meet as a class, I will meet with students to hear practice presentations and to give feedback on their projects. So this course will have the feel of a math seminar, with an emphasis on improving communication skills.

**Prerequisites:** Any two 200 level (or higher) math classes.

**Grading:** 50% reports, 30% presentations, and 20% class participation

**Important Dates:**

January 17 no class (I will be away)

Feb 28 draft 1 due

March 4-8 no class (Spring break)

April 18 Report due

April 30 Last day of class