



Cornell University
Department of Mathematics
MATH 5080 – Mathematics for
Secondary School Teachers



**NYS Master
Teacher Program**

Mathematics Professional Development (all sessions will be held via Zoom)

February 27, 2021 ◆ 9:00 am – 2:30 pm

9:00 – 9:15 am **Welcome & Overview**

9:20 – 10:35 am **STEAM Unplugged for the Virtual Classroom**

Toni Gamils (Teacher Center of Central Westchester)

Keeping kids apart does not mean they cannot engage in STEAM projects. One of the best things about STEAM activities is the collaboration and cooperation skills integrated into every project. Although necessary for the current times of COVID, it seems impossible to teach STEAM without sharing materials. But it is possible! We just have to go about it a little differently for the time being. In this session, we will look at some previous STEAM projects and modify them to help us make learning fun and engaging for our students.

* Please bring to the session: 2 pencils, 5 sheets of paper, tape, tin foil, ruler, & 5 paper clips

10:45 – 11:45 am **Polynomials!**

Daniel Halpern-Leistner (Cornell University)

Polynomial equations, like $x^2 + y^2 = z^2$, have captivated mathematicians for (literally) thousands of years. And yet, there are seemingly simple questions about seemingly simple equations that remain mysteries to this day. It's not that systems of polynomial equations are unsolvable – just very rich. We know a LOT more about polynomial equations today than when we started. Our desire to understand them has motivated entirely new mathematical subjects, has inspired beautiful ideas about geometry in higher dimensions, and has forced us to ponder what it even means for something to be knowable at all. I will talk about the ways in which systems of polynomial equations are all around us, how modern mathematicians think about them, and why we care so much.

11:45 am – 12:30 pm **Lunch & Discussion**

In break-out rooms, participants will discuss the morning's presentations and share summaries of their discussions with the whole group.

12:40 – 2:20 pm **Developing a Growth Mindset Classroom**

Kristin LaBeau (Syracuse University)

In this session we will explore research on learning and mindsets that have the power to transform students' learning experiences. This session will provide you with strategies and ideas to use in your own classroom so you can work to build a mistake friendly classroom culture and foster a growth mindset in your students. Time will be provided for participants to share their ideas and experiences.

2:20 – 2:30 pm **Closing**

Click [here](#) to RSVP (deadline – 12 noon on Tuesday, February 23, 2021)

Questions? Contact Mary Ann Huntley (huntley@math.cornell.edu)