

TEACHING STATEMENT

ASILATA BAPAT

I am very enthusiastic about teaching. Being able to communicate the subject in an effective and interesting way is important to me, and I consider it a vital part of my role as a mathematician. Over the last few years, I have taught regularly in several different contexts.

I am constantly working hard to develop new teaching styles and to become an effective teacher, and students in my classes have consistently given me positive feedback. For example, at the University of Chicago, I always received high scores in end-of-quarter evaluations, and I was awarded the *Lawrence and Josephine Graves Prize* for teaching.

Additionally, I have spent three summers teaching undergraduate and graduate level courses at a high school summer program in Mathematics (Canada/USA Mathcamp), during one of which I was also an Academic Coordinator.

PHILOSOPHY AND GOALS

From the first day of my class, I try to build an environment of open communication, both among the students and with me. I encourage class bonding so that students feel comfortable with speaking up and asking questions, and discussing with each other. I try to ensure that every student feels supported, while keeping things fun and interesting. Students have remarked on my enthusiasm and positivity in class, and two of my U. Chicago students wrote the following comments in their evaluations.

“[She] encouraged questions and could answer them, was always available outside of class and emphasizes that improvement is important.”

“She genuinely cares about each student’s learning of the material.”

I work on presenting the material in the clearest and most natural way possible. I like to build up a supply of examples and counterexamples over the course of the class, to keep the abstract material grounded. One of my Mathcamp students wrote the following.

“She does an excellent job of balancing the rigorous foundations of a subject with interesting examples of its application, which made her classes some of the most fascinating ones I took.”

Another of my U. Chicago students wrote the following.

“She clearly explains and streamlines information in a way that is easy to understand.”

I genuinely enjoy sharing my love for mathematics with my students, and they seem to appreciate it as well. One of my Calculus students switched into a mathematics major because of how much she enjoyed my class!

TEACHING AT THE UNIVERSITY OF CHICAGO

At the University of Chicago, I taught independent sections of courses, usually with 15–30 students each. The teaching was typically three to four hours a week. Most notably, I was

responsible for designing my own exams, problem sets, and grading scheme. Additionally, in my second year, I was a teaching assistant for a year-long Honors Algebra sequence.

I taught the following courses.

1. A year-long Calculus sequence (taught twice). This was a rigorous introduction to Calculus for science and economics majors.
2. An intensive summer course on Linear Algebra that met for six hours a week.
3. A two-quarter sequence on Elementary Number Theory and Geometry for non-technical majors. Most students in this class were History, English, and Theater majors, and teaching students with no technical background was a valuable experience.
4. (Current) An IBL (inquiry-based learning) section of Honors Calculus. Admission to this class is by invitation only, and the students are some of the strongest incoming math majors.

Seminar talks. Several times a year, I give talks in graduate student seminars at the University of Chicago. In the Pizza Seminar, I have given colloquium-style talks to a general mathematical audience of graduate students. In the Representation Theory Seminar, I have given more specialized talks on subjects close to my research, to an audience of peers.

I have also been involved with organizing each of these seminars: one year as a co-organizer of Pizza seminar, and two years as the organizer of the Representation Theory Seminar.

TEACHING AT CANADA/USA MATHCAMP

Canada/USA Mathcamp is a summer program for high school students with exceptional talent in Mathematics. I was a Mentor in this program in 2012 and in 2013, and an Academic Coordinator in 2015.

Each mentor at Mathcamp typically teaches four to five different week-long classes on topics of undergraduate and graduate level mathematics. My job as a mentor included developing and teaching these classes, writing challenging and fun problem sets, giving colloquium talks, mentoring new mentors, and supervising student projects. Some selected topics that I taught are: The Fundamental Group, Multilinear Algebra, Representation Theory of Finite Groups, and Matrix Groups.

The hiring process for Mathcamp mentors is very competitive. I was granted “Mathcamp tenure” after my first summer, which means that I can return to teach without reapplication in any summer during my career as a graduate student. As a tenured mentor, I regularly serve on various Mathcamp committees, such as to grade qualifying quizzes and select students, as well as to hire new mentors and other staff.

In 2015, I was one of the two academic coordinators. The academic coordinators are responsible for designing and running all the academic activities at Mathcamp. My duties included inviting and hosting external visitors, designing a balanced class schedule, assigning students to projects, and teaching. This job was an excellent experience in managing a large and dynamic collection of classes with the added complications of external visitors.