Rauan Akylzhanov

Statement of Teaching Philosophy

> Education is the kindling of a flame, not the filling of a vessel.
>
> *Socrates*

Teaching philosophy

Mathematics has mostly two sides: it is a world of beautiful and elegant ideas and a collection of tools for practical problems. I believe that both perspective of mathematics should be emphasized in the classroom.

Students need to learn how to learn. The best way to do that is to reflect and ask questions. Therefore I tend to engage students in discussions to contemplate both aspects of mathematics. In this way they make crucial connections and maintain their motivation.

My philosophy is that teaching should involve both lecture and assisted discovery. I usually begin a class by reminding the students of something they have seen in the past, and then develop the new topic based on their previous knowledge. Therefore, it is essential that students grapple with each concept on their own, I always allocate a period of time for discussion. During this time, students are encouraged to communicate ideas or solutions to each other. Ideally, this cycle should lead to an independent research later on.

Experience

I worked as a faculty teaching assistant at Lomonosov Moscow State University. I was responsible for instructing my courses (mathematical analysis, real analysis and calculus . I ran practical seminars in mathematical analysis (years I and II) and the theory of algorithms (basics of Linux programming in C, basic IDE). Since moving to the United Kingdom, I worked as a Graduate Teaching Assistant at Imperial College London. I served the following courses:

- Fall 2017, M2AA2-Multivariable calculus, Dr Walton Andrew, demonstrating & marking;
- Fall 2017, M3C-High Performance Computing, Dr Ray Prasun, marking;
- Fall 2017, M3A50-Data Science, Dr Caroline Colijn, marking, R computer sessions: Introduction to R;
- Spring 2016, M1P1-Analysis I, Prof Richard Thomas, demonstrating & marking;
- Fall 2015, M2PM1, Real analysis, Prof Michael Ruzhansky, demonstrating & marking;
- Fall 2015, M1P2, Algebra, Dr John Britnell, demonstrating & marking;

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- Spring 2015, Joint Maths and Computing (JMC) Tutor, weekly small group tutorials for JMC students, was responsible for leading full session;
- Spring 2015, M1P1-Analysis I,Prof Richard Thomas, demonstrating & marking;