Teaching Philosophy

My teaching philosophy is relatively straightforward: I **respect** each student as distinct individual, I engage with **equity and inclusion** topics despite the quantitative nature of my courses, and I strive to constantly improve the **efficiency** of my lectures.

At Penn State, I teach actuarial science undergraduate courses. Although all faculty members in the program are based in the Smeal College of Business, our students come from three departments: Risk Management (in Smeal), Statistics and Mathematics (both in Eberly College of Science), and therefore come to my courses possessing varying levels of prior knowledge of calculus, probability, statistics, and business—all are key elements of actuarial science. Every year I teach between seventy to one hundred undergraduate students, and the first thing I do is always getting to know each of them on an individual basis. Doing so not only enables me to be mindful of their different background and keep track of their individual study progress, but more importantly, makes each student feel seen, heard, and appreciated. Many times in the past years a student would raise hand to answer (or ask) a question in class, and when I correctly called their name—especially during the first couple weeks—I could see the sparks in their eyes that showed a surprised joy of being recognized. When feeling respected, students are more confident to come to my office hours (or simply email me) and discuss any challenges they face inside and out of the classroom, and they are also motivated to perform better.

Although the actuarial science course material itself is mathematical by nature, I am actively looking for opportunities to promote diversity, equity and inclusion within and beyond the classroom. One example can be found in my course project for RM 411, in which students need to price (in an *actuarially-fair* way) and sell a life insurance product to a real-life client. However, although the concept of conventional insurance is widely understood and accepted in the western countries, it can be controversial in the Islamic society with two specific concerns, namely the uncertainty in the payout of the benefit (that can be seen as a form of gambling), and the interest charged by an insurer (that can be seen as usurious). The Islamic alternative to conventional insurance is called Takaful, which can be generally understood as a risk-sharing model (co-op system) other than a risk-transfer model. I clearly note this at the first page of my project assignment so that not only a Muslim student knows what needs to be done, but equally importantly, a non-Muslim student learns about it so that they get to know how diversity and inclusion matter and materialize within the insurance business.

An economist by training, I am always looking for improvements that can benefit more students in their learning without making others worse off—a concept called "Pareto efficiency" in economics. In the field of actuarial science, students are expected to pass several professional actuarial exams (administered by professional actuarial organizations) before graduation to find good jobs. Those exams are difficult by design, and a key goal of mine is to best prepare them for it, utilizing every seventy-five-minute lecture in the most effective way. I skip proofs that are too technical (while still encouraging interested students to read them after class), and I emphasize the importance of thoroughly understanding a formula rather than simply memorizing it. Acknowledging students coming from a diverse background with different mathematical skills, my in-class sample questions are typically straightforward and intuitive. Nonetheless, when discussing a simple question I would also encourage all of them to think what they *could* change to make the question more difficult—so that the more advanced students still have the chance to learn in their own, faster pace. It is always rewarding to get emails from students—many from underrepresented groups—weeks, months, sometimes even years later telling me that my courses had really helped them in preparing and passing the professional actuarial exams; finding an internship/job; or in achieving any milestones in their professional career.

Teaching can be a simple task, yet it can also be a delicate art and a challenging craft. We pour knowledge into our students to see them learn and grow, and at the same time they also give us a chance to check and reshape ourselves. I am humbled for the opportunity to educate the undergraduate actuarial science students at Penn State, and I vow to keep polishing and perfecting my craftsmanship.