Teaching Statement of Marc Van Uffelen

Philosophy and Approach

Teaching is not only about conveying knowledge; it is about inspiring curiosity, fostering critical thinking, and equipping students with tools to navigate complex and evolving challenges. As a teacher, I aim to create an engaging and inclusive learning environment that challenges students while supporting their individual growth. My teaching philosophy is guided by three core principles: clarity, interactivity, and adaptability.

Experience and Pedagogical Strategies

My teaching experience spans over several years, including roles as a Teaching Assistant in *Arbitrage Pricing* and *Informatica II* at Università della Svizzera italiana (USI), as well as prior involvement in foundational courses such as *Calculus I*, *Introduction to Stochastics*, and *Probability Theory* at the Karlsruhe Institute of Technology (KIT). These roles have allowed me to work with diverse student cohorts, from undergraduates grappling with mathematical foundations to advanced finance students exploring complex arbitrage principles.

In my teaching, I prioritize:

- **Clarity in Communication**: By breaking down complex theories into digestible concepts, I strive to make advanced topics such as derivative pricing accessible to all learners.
- **Interactive Learning**: I believe students learn best when they are active participants in their education. I frequently ask thought-provoking questions to guide students toward discovering how classroom material can be applied in practice. This Socratic approach encourages them to connect theoretical concepts with real-world scenarios, such as identifying potential applications of stochastic models or evaluating trading strategies in financial markets. These interactive discussions not only enhance understanding but also empower students to become independent problem-solvers.
- **Adaptability**: Teaching diverse topics has equipped me with the ability to tailor content to different learning styles and levels of prior knowledge. Whether explaining stochastic models to finance students or calculus techniques to engineers, I adapt my approach to ensure inclusivity and engagement.

Vision for Teaching Finance and Mathematics

My research in asset pricing, financial markets, and derivatives informs my teaching. I aim to bridge the gap between theory and practice, empowering students to see the applicability of concepts in real-world scenarios. In addition, I believe in teaching skills

and concepts that extend beyond the immediate scope of the class. By emphasizing critical thinking, foundational methods, and transferable problem-solving techniques, I help students build capabilities that will benefit them throughout their academic and professional journeys, regardless of the specific class content.

My commitment to preparing students for the future includes fostering a mindset of adaptability and equipping them with tools to address complex and novel challenges. For example, while teaching topics such as arbitrage pricing, I incorporate broader analytical frameworks that students can apply across various fields

My multilingual abilities (French, German, English, Italian, and Chinese) also enable me to connect with an international student body, a vital skill in today's globalized education landscape.

Commitment to Growth and Innovation

I view teaching as a reciprocal process where I learn from students as much as they learn from me. Regular feedback from students, peers, and mentors is central to my continuous improvement. Additionally, I like to incorporate innovative teaching tools, such as interactive software and online learning platforms, to enhance engagement and accessibility.

In conclusion, I am deeply committed to cultivating an educational environment that is rigorous yet supportive, innovative yet grounded in fundamentals. By nurturing curiosity and critical thinking, I hope to inspire the next generation of thinkers and practitioners in finance and mathematics.