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Teaching Philosophy

My teaching philosophy is strongly rooted in my position as Associate Professor in the Department of Mechanical Engineering, where **I pursue excellence in both research and education**. I fully acknowledge that this balance can be challenging, but it is precisely this interplay that motivates me and enriches my experience as a faculty member at Villanova. I truly believe that excellence in teaching fosters excellence in research and vice versa. In fact, the existing synergies between research and teaching help me improve everyday as a teacher-scholar. Villanova offers me the resources and the support to make this happen.

My most important teaching principle is that **I care about my students as vulnerable, growing young adults**. Educational scholars have emphasized that students are more motivated and willing to learn when their instructors care about them. I work to build their confidence in me and the Caritas mission I represent. I key into moments to acknowledge and support them when they express that they are challenged, for these moments of challenge are often critical moments of significant growth. And students seem to positively value that, not only in the CATS scores, but also through the nomination to the **Reverend William F. Farrell Award** that I was granted in 2022.

The courses I enjoyed and learned the most from when I was a student had two things in common: they were the most challenging ones and their instructors offered generous resources to their students. The moment I decided to become a faculty member I knew that I wanted to help students the way my former professors guided me: **setting high learning expectations but also providing inordinate learning resources**. Examples of these initiatives where I make myself available to support students in their learning include: (i) extended office hours before midterm exams, (ii) recordings of study sessions for those who can not attend synchronously, and (iii) additional office hours late in the evening to accommodate students available at that time of the day. Based on the feedback received, students acknowledge this approach positively.

Since I started teaching at Villanova, I have sought to advance active learning technological platforms. In my first semester teaching at Villanova, I co-led with Prof. Gang Feng the pilot program of Top Hat active-learning platform. Since then, **I have been an ambassador for Top Hat across the University, sharing my experience at different workshops and helping other colleagues use it in their courses**. I am thrilled to know how this tool has positively impacted more than 75 courses and 1300 students at Villanova. In the Fall 2021 semester, I also led a new Pilot program with Kritik peer-grading platform that allows students to improve critical thinking skills in Bloom's Taxonomy.



Figure 1. Word cloud composed with students' answers to the following mid-term survey question: What do you like best about this class? [ME 2100 - Statics].

The extremely positive experience and feedback received with these active learning platforms made me develop a **research project that uses technology to identify the needs of every single student and suggest tailored out-of-class learning activities**. As part of this research project, I have completed a human subjects protocol through the Institutional Review Board. The protocol was approved to start the research activities, and I am preparing a research paper on this topic that I plan to submit to *The Journal of Higher Education*.

In summary, as an Associate Professor, I still have much to learn as I strive to grow as a teacher-scholar at Villanova. Balancing the exceptional attention I devote to my students with the scientific and funding pursuits that guide my research is challenging but deeply meaningful. My nomination for the Lindback Award for Outstanding Teaching (semifinalist in 2021, 2022, 2023, 2024, and 2026; finalist in 2022), together with previous recognition through the **Farrell Award** (granted in 2022), the **Junior Faculty Award for Excellence in Teaching** (granted in 2024), and the **VUEAS Award for Teaching Excellence** (granted in 2024), gives me the motivation and strength to embrace this challenge. Because **guiding students to learn, grow, and become independent thinkers remains the most appealing part of my role as a Villanovan and my support of Villanova's Augustinian mission**.