



VITAL Instructional Minigrant Awards 2025-2026

Join us in celebrating our faculty colleagues who were awarded instructional minigrants to implement their innovative, learning-focused projects. This issue presents brief descriptions of recipients' projects.



Dr. Stephen Andriole, Accounting & Information Systems, VSB:

Prompt Engineering & Generative AI. Design and implement improved methods for teaching prompt engineering to enable students to better understand how generative AI can help them create new text, code, images, video and music.



Dr. Chara Armon, Augustine and Culture Seminar Program, CLAS:

Repairing Nature: Options for a Healthy Planet. Design and offer a course focused on restoration and regeneration of the natural world. Offers learning about options for restoring nature that exceed conservation and sustainability. Topics include soil repair and carbon drawdown, and assessing nature's forms of intelligence.



Drs. Linda Copel, Monika Pogorzelska-Maziarz, & Bridgette Rice, M. Louise Fitzpatrick College of Nursing:
Transforming Nursing Research: An Innovative Mixed-Methods Course for PhD Students.

Design and implement an innovative mixed-methods research course for PhD nursing students to address a critical gap in the curriculum. Enhance students' ability to design, conduct, and critically evaluate mixed-methods research, preparing them for high-impact, interdisciplinary studies that advance nursing science and improve healthcare outcomes.



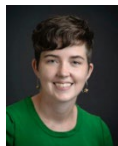
Dr. Denise Downey, Accounting and Information Systems, VSB:

ACC 2430 Auditing- A Course Redesign. Redesign the course to flip the classroom and foster greater engaged student learning by creating video content and pre-class assignments. Structure class sessions as a working lab to apply theory to practice, work through practice problems and cases, and engage with professionals through live discussions and new technologies. Feature AI integration to provide students with opportunities to better understand its uses and shortcomings.



Dr. Thomas Griffin, Finance and Real Estate, VSB: MSF 8612: Investments.

Develop a new course for VSB's Master of Science in Finance program to provide students with a rigorous mathematical foundation in financial theory and cutting-edge knowledge of professional practice. Integrate new teaching and learning approaches to meet the standards of a STEM-designated program and align with the Chartered Financial Analyst (CFA) Institute University Affiliation Program requirements.



Drs. Yumi Lee & Mary Mullen, English, CLAS: *Graduate-Level Writing and Research Support in the English M.A. Program.* Develop and implement forms of writing support for graduate students in our MA program by creating a resource library, instructional materials, workshop curriculum, and graduate student writing groups.



Dr. Leila Malekmoitei, Mechanical Engineering, COE: *Integrating Engineering Design and Sustainability in Junior Mechanical Engineering Course: An Active and Project-Based Approach Using Solidworks.* Enhance students' skills in SolidWorks modeling, mechanical design, and sustainability through a real-world engineering challenge. Engage students in modeling a structural or mechanical component, performing finite element analysis, and evaluate its performance under realistic loading. Bridge theory and practice to develop expertise in material selection, sustainability, and design criteria.



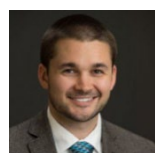
Dr. Stephen McGill, Mechanical Engineering, COE: *Embedded Systems for Hardware-Based Learning in Mechanical Engineering.* Add new hardware-based learning projects to the freshmen-level ME1205 (Introduction to Computer Programming) so that students will learn about sensors, data visualization and algorithm development using embedded systems. This work will provide a more engaging environment to learn computer programming and a concrete way to prepare for careers in industry or research.



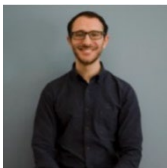
Dr. Alysha Meloche, Management and Operations, VSB: *From Passive to Interactive: Improving Formative Learning for Innovation Management.* Enhance the online learning experience in MBA 8730 by developing interactive Adobe Storyline lessons on creativity and innovation management. Replace passive readings and videos with engaging, formative assessments, improving student comprehension and participation. Integrate interactive content into the LMS to ensure accessibility, foster deeper learning, and align online instruction with in-person engagement.



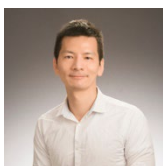
Dr. Shelly Rathee, Marketing, VSB: *Unlocking Data-based Curriculum: Crafting an SPSS Guide and a Dataset Hub for Future Marketing Analysts.* Create a user-friendly SPSS manual and develop a repository of curated customer perception datasets from real-world business scenarios. Support asynchronous learning by providing step-by-step guidance for students to independently navigate data analysis and serves as a quick reference tool, enhancing their proficiency with statistical software. Address the challenge of identifying relevant data amidst the explosion of information by offering curated, meaningful datasets. Together, these resources enhance student's practical data-handling capabilities and retain their learning beyond the classroom to strengthen their capability in overall data-driven learning curriculum.



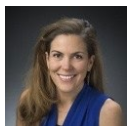
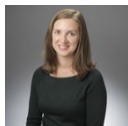
Drs. Gabriel Rodriguez & Jacob Elmer, Chemical and Biochemical Engineering, COE: *Developing Lab Content and Educational Experience for Tissue Engineering Class.* Enhance undergraduate student engagement, interdisciplinary learning, and hands-on experiences in Tissue Engineering by integrating laboratory experiments and case studies for collaborative learning strategies. Provide a comprehensive foundation for students entering the biomedical field.



Dr. Zachary Stillman, Chemical and Biological Engineering, COE: *Enhancing Group Work Assessment and Peer Evaluation in Chemical Engineering Lab Courses.* Strengthen group work and peer evaluation in the Chemical and Biological Engineering Unit Operations Lab sequence through structured feedback, instructor training, and iterative team contracts. Use AI-assisted summaries and guided discussions to foster open, constructive feedback. Improve student communication, collaboration, and problem-solving. Aligning with departmental and ABET goals, this project provides a model for enhancing teamwork assessment, potentially serving as a pilot for other CBE courses.



Dr. Ken Chih-Yan Sun, Sociology and Criminology, CLAS: *Innovative Approaches to Teaching Social Psychology and Inequalities.* Adopt a sociological social psychology approach to exploring systems of inequalities in the US and transnationally and examine the ways in which forces such as race/ethnicity, gender, and citizenship shape our emotions and perspectives. Familiarize students with the major theories and concepts in the field of social psychology and prepare them to apply these theories and concepts through creative assignments such as visual essays, media analysis papers, and presentations.



Dr. Kevin Waters, Kelly Good & Virginia Smith, Civil and Environmental Engineering, COE: *Enhancing Student Engagement and Visualization through Integrated Lab Activities with a Hydraulic Flume.* Redesign portions of an existing course through integration of hands-on lab

experiences which will provide students with consistent opportunities for enhanced engagement, visualization, and feedback. The course will be taught in a new lab space, utilizing a modern hydraulic flume and companion models to emphasize data collection, problem solving, and analysis, enabling students to improve technical and visualization skills while also making connections between lecture topics and real water resources applications.



Dr. Ryan Weldzius, Political Science, CLAS: *Extending Accessibility for Data Science Courses in the Social Sciences.* Redesign undergraduate and graduate data science courses to be fully accessible online, featuring pre-recorded video lectures and R programming tutorials. Course materials will be hosted on a GitHub repository, granting students ongoing access even after the course ends. This ensures they can review challenging concepts during the semester and revisit content as needed for future coursework or research projects, fostering long-term learning and skill retention.

We extend our gratitude to the members of the VITAL Minigrant Review Committee: Patricia Bradley, M. Louise Fitzpatrick College of Nursing; Paul Bernhardt, Mathematics & Statistics; Irene Kan, Psychological & Brain Sciences; Mary T. Kelly, Economics; Frank P. Maloney, Astrophysics & Planetary Science; James C. O'Brien, Mechanical Engineering; Edward Wahesh, Education & Counseling

[Minigrant program details](#)

All photographs were taken from Villanova University's website.

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