



JAMES MADISON
UNIVERSITY®

SEMINAR

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Development of Research, Education, and Training Program on Nuclear Fuel Cycle and Economics Towards Advanced Reactor Technology at VCU

Abstract: With a \$1.5 million grant from the U.S. Department of Energy, Virginia Commonwealth University (VCU) is collaborating on research to advance the safety, efficiency, and environmental sustainability of nuclear energy. The funding will establish a pioneering research, education, and training center dedicated to advancing our understanding of the nuclear fuel cycle (NFC) and economic roadmap for next-generation reactor designs. The center will be bringing together experts from VCU and two historically black universities – Virginia Union University and Virginia State University – creating a one-of-a-kind educational and research training program that has never existed in Virginia, fostering diversity and collaboration.

The center's mission will be driven by five research objectives: unlocking the economics of the NFC, advanced fuel cycle operations, designing the future of nuclear fuel, revolutionizing used fuel Management, and strengthening nuclear material detection and accountancy. These research objectives will be pursued across materials science and chemistry, neutron transport, heat transfer and systems, nuclear material quantification, and engineering economics and finance. Each of these areas represents a critical component of the NFC and the development of next-generation reactors. By addressing the technical and economic challenges of nuclear energy, this research has the potential to transform the industry and contribute to a more sustainable future.

**Meet the Speaker
Seminar**

**2:00 pm, PCB 3144
3:35 pm, King 159**