

Purdue University IE and VMS Solutions Forge Strategic Partnership to Address Semiconductor Talent Shortage

Purdue IE and VMS Solutions partner to train future chip engineers with digital twin tech, helping close the talent gap and boost U.S. supply chains.

WEST LAFAYETTE, IN, UNITED STATES, September 29, 2025 /EINPresswire.com/ -- Edwardson School of Industrial Engineering at [Purdue University](#) and [VMS Solutions](#) have announced a new collaboration to advance education and research in semiconductor manufacturing and supply chain management. The partnership aims to prepare the next generation of engineering talent to address the chronic workforce gap in the semiconductor industry.

Through this partnership, students and researchers at Purdue will gain hands-on experience using VMS Solutions' advanced simulation and planning software, MOZART Fab WISE. This industry-grade digital twin and scheduling technology models the complex dynamics of semiconductor production environments. Edwardson School of Industrial Engineering at Purdue will start to use this software in IE 490: Semiconductor Manufacturing and Supply Chain in the fall semester, with plans to expand its use into more courses. Students will engage with real-world challenges related to factory operations, capacity planning, scheduling and decision-making under constraints.

VMS Solutions brings over 25 years of industry experience supporting some of the world's leading semiconductor manufacturers. Its solutions are trusted by global fabs for optimizing production planning, enhancing throughput, and driving autonomous manufacturing initiatives. The collaboration offers Purdue students a unique opportunity to work with the same technologies used by major players in the industry.

"This collaboration brings the realities of advanced manufacturing directly into the classroom and lab," said Young-Jun Son, the James J. Solberg Head and Ransburg Professor of Edwardson School of Industrial Engineering at Purdue University. "By working with commercial-grade technologies, students can develop practical skills that are directly applicable to modern semiconductor fabs and smart factories."

Keyhoon Ko, executive vice president of VMS Solutions added, "By bringing industry-grade solutions into the classroom, we aim to foster a new generation of engineers who are not only technically proficient but also ready to contribute from day one. The semiconductor industry urgently needs talent in this field – from manufacturers operating fabs to technology companies

developing next-generation solutions – and our goal is to help close the gap."

This initiative reflects a growing trend in academia-industry collaboration to ensure the semiconductor ecosystem remains strong and innovative. It also aligns with national priorities to strengthen domestic chip production capabilities and bolster supply chain resilience.

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