Supercomputing Upgrade Elevates NanoEngineering Education at Rose-Hulman

An alumni gift expands computing and educational opportunities for students within Rose-Hulman's Physics, Optical Engineering, and NanoEngineering program.

TERRE HAUTE, IN, UNITED STATES, July 8, 2025 /EINPresswire.com/ -- An anonymous alumni gift is expanding computing capabilities and educational opportunities for students within Rose-Hulman Institute of Technology's nationally recognized Physics, Optical Engineering, and NanoEngineering (PHON) academic program.

This special gift (amount undisclosed) has provided new high-powered and expanded memory supercomputer workstations that will allow students to complete advanced classroom activities, special interest courses, and research projects that examine the nano-sized science behind computational materials science, quantum mechanics, semiconductors, and battery and solar cell design.

"Starting this fall, our students will now be able to do serious aspects of nanoengineering. Specifically, they will be able to examine where the atoms are moving within surface properties and compare that data against the original atomistic simulations of those properties," stated Daniel Hashemi, PhD, assistant professor of physics, optical engineering, and nanoengineering. He specializes in the structural and magnetic characteristics of nanostructures.

Also, with the super workstations available online, students will be able to utilize this new technology at any time and from any place—on or off campus—to work on academic and research activities. The workstations may also be used to assist students in completing coursework for classes in other academic areas on campus.

"The best way of learning is by doing and these supercomputing workstations give our students the technology to explore the nano-sized world that makes up the properties that's around us every day," said PHON Department Head and Professor Galen Duree, PhD. He emphasized that the advanced computing capabilities further enhance technology that makes Rose-Hulman a national leader in undergraduate physics and optics education.

Other department laboratory technology includes the MiNDS cleanroom in Myers Hall, providing hands-on experiments in fabrication, characterization and modeling of micro/nano devices and systems; photonics, fiber, acoustic, and semiconductor magneto-optics laboratories throughout

the PHON area of Moench Hall; and the Oakley Observatory, a campus facility used for astronomy and photometry research.

“We’re grateful for these gifts that put state-of-the-art technology in the hands of our students and faculty and keeps our department on the leading edge. This technology also enhances our students’ post-graduate opportunities in industry and makes them key candidates for graduate school and doctorate programs,” said Duree.

Learn more about the exciting things happening in the Rose-Hulman’s PHON program at www.rose-hulman.edu/physics.

About Rose-Hulman Institute of Technology
Rose-Hulman Institute of Technology, located on a scenic 1,300-acre campus in Terre Haute, Indiana, is home to 2,300+ students from 47 states and 33 countries. Consistently ranked among the nation’s top undergraduate STEM colleges, Rose-Hulman delivers a strong return on investment from day one. Students collaborate with esteemed faculty in labs and innovation centers equipped with cutting-edge technology—opportunities often reserved for graduate students elsewhere. With nearly 100% career placement for two decades, Rose-Hulman prepares graduates for success. Founded in 1874, Rose-Hulman offers a vibrant student experience with a close-knit campus community, nationally recognized competition teams, 20 NCAA Division III sports, 90+ student clubs, and 12 fraternities and sororities. Learn more at rose-hulman.edu.

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