

Marquette University: Receives \$1.2 million NSF grant to expand mathematics, science and computer science education in K-12 schools

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MILWAUKEE — An interdisciplinary team led by [Dr. Jill Birren](#), associate professor of educational policy and leadership in the Marquette University College of Education, has received a nearly \$1.2 million grant from the National Science Foundation through the Robert Noyce Teacher Scholarship Program to expand mathematics, science and computer science education in partner school districts and schools.

The award, “Masters and Licensure Program to Prepare Mathematics and Science Teachers with Computer Science Certification and Expertise,” supports a 14-month master’s program to prepare outstanding science and mathematics teachers who also have capacity to teach computer science courses. Participants will complete requirements for middle/secondary teacher certification in science or mathematics alongside specialization credentials in computer science.

“The grant is an exciting opportunity to build upon our existing [Noyce program](#) by developing a pathway to incorporate a computer science credential for scholars,” Birren said. “Our goal is to address an area of severe need for mathematics and science educators with computer science education credentials in under-resourced schools. Through our Noyce programs, we are hoping to recruit and place professionals with backgrounds in STEM into high-need schools in our community.”

Birren is the principal investigator on the team, which includes co-investigators [Dr. Leigh van den Kieboom](#), associate professor of educational policy and leadership; [Dr. Terry Burant](#), associate clinical professor of educational policy and

leadership; and [Dr. Dennis Brylow](#), professor of computer science in Marquette's Klingler College of Arts and Sciences.

"This project exemplifies Marquette's Catholic, Jesuit values, as it strives to further the advancement of knowledge and provide access to a transformative education for students in our community," said Dr. Heidi Bostic, dean of the Klingler College of Arts and Sciences and the College of Education. "Dr. Birren and her team are building upon their previous awards to further the work of expanding STEM education in schools that need it the most. Scholars who complete this program will provide advanced education to students and prepare them for continued study and careers in high-demand fields."

This grant will bring together Marquette faculty with high-need Milwaukee area partner districts in Milwaukee Public Schools and the Shorewood School District, as well as Cristo Rey Jesuit High School, Milwaukee Academy of Science, and Seeds of Health Charter Schools — all schools with a long history of collaboration with the program's investigators.

The NSF's Robert Noyce Teacher Scholarship Program invites innovative proposals that address the critical need for recruiting, preparing and retaining highly effective elementary and secondary mathematics and science teachers and teacher leaders in high-need school districts. To achieve this goal, Noyce supports talented science, technology, engineering and mathematics undergraduate majors and professionals to become effective K-12 STEM teachers. It also supports experienced, exemplary K-12 STEM teachers to become teacher leaders in high-need school districts. In addition, Noyce supports research on the effectiveness and retention of K-12 STEM teachers in high-need school districts.