

PR Award #: U336S190036

Organization Name: Purdue University

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Project Model: Residency Model

Competitive Preference Priorities: CPP1: Projects designed to improve student achievement in computer science; CPP2: Projects submitted by novice applicants

Invitational Priority – Opportunity Zones: (Y/N) Yes

Requested Total Award Amount: \$5,177,290.00

Project Description:

The Indy STEM Teacher Residency (ISTR) Program is a collaborative partnership between Indianapolis Public Schools (IPS) and Purdue University (IPS-PU) with an overall vision of strengthening the educational outcomes of students in the largest urban school district in Indiana, IPS, by preparing culturally competent, highly qualified career teachers who will elevate student achievement in middle and high school science (including computer science), technology, engineering, and mathematics.

Project Expected Outcomes:

The IPS-PU partnership proposes to design, develop, and execute the *ISTR Program*, an 18-month teacher residency program in which Teacher Residents will earn an MEd and K-12 Integrated STEM Graduate Degree Certificate, followed by a two-year induction program. ISTR will support up to 60 participants over 5 years as they develop the knowledge, skills, and dispositions of highly effective STEM teachers. The Indy STEM Teacher Residency (ISTR) Program will recruit a diverse pool of candidates; Candidates will complete licensure program, online masters, and STEM certificate program; Resident teachers will develop skills and knowledge throughout the program, as evidenced through surveys, classroom observations, and interviews. Students in participants' classrooms will have better math and science achievement on iLearn and NWEA assessments than students in comparable non-participants' classrooms. 80% of resident teachers will remain in IPS for at least 3 years; teacher retention will remain higher than non-resident teachers.

Project Special Features:

This project will expand the number and diversity of individuals possessing a strong academic or professional background without extensive teaching experience, but who are interested in pursuing a career in secondary (grades 7-12) STEM teaching and developing enhanced knowledge, skills, and disposition for integrating engineering and technology design into science, mathematics, and computer science instruction through project-/problem-based, inquiry-orientated approaches. IPS-PU partnership is committed to continuous improvement, excellence and innovation. The IPS-PU partnership strives to be on the forefront of what is best for teacher student learning based on time-honored and contemporary research and practice. By preparing top-tier 21st Century STEM teachers to teach a STEM content, skills, and practices through the integration of engineering design in culturally and socially relevant ways, ISTR teachers will have a highly positive impact on elevating K-12 STEM learning as well as increasing STEM interest among a diverse population of Indiana students.

Project Partners: Purdue University College of Education and Center for Advancing the Teaching and Learning of STEM (CATALYST); Indianapolis Public Schools; Arsenal Technical High School, George Washington High School, Henry W Longfellow Middle School