

**Waukegan School District 60 (WPS60) Education Innovation Research (EIR) proposal** will develop an improved STEM -Computer Science Engineering Design Program (STEM-CSED) in our lower achieving, high needs schools, impacting 150 teachers and more than 10,000 students. This STEM CSED project addresses the absolute priorities by **coupling a university-based comprehensive professional development model** with an existing, innovative STEM program integrating computer science, engineering, and design. The model will include: 1) high-quality professional development, 2) proven instructional methods, and 3) educational research. The proposal seeks to increase access to high-quality resources while enhancing teacher preparation in STEM and computer science to increase student interest, motivation, and achievement.

**Partnerships:**

Key to this proposal is the integration of a robust K-12 computer science, engineering, and design curriculum with strong professional development partnerships from 1) Northeastern Illinois University (NEIU) Computer Science Department, 2) the NEIU Math, Science, and Technology for Quality Education Department (MSTQE), and 3) the Lake County Regional Office of Education (ROE). The STEM CSED project will seek gains in academic achievement by enhancing teacher content pedagogical knowledge via ongoing collaborative professional development.

**Outcomes:**

The STEM CSED project is designed to (1) enhance, and expand STEM and Computer Science (CS) Education and create a K-12 Computer Science Course Pathway; (2) increase teacher content pedagogical knowledge in both computer science, and STEM; (3) increase student academic achievement in both Mathematics and Science; (4) increase student motivation and interest; (5) increase access to high-quality resources and opportunities for future STEM careers. The STEM CSED program is aligned to the Next Generation Science Standards (NGSS) K-12 Engineering and Design Standards, The International Society for Technology in Education (ISTE) Standards, and The Common Core Mathematics Standards.