

**Proposal Submission to the US Department of Education:
Education Innovation and Research (Early-Phase) Grant Program**

**The STEM Career Prep Model
Abstract**

Lumity, in partnership with the Chicago Public Schools (CPS) and Outlier Research & Evaluation /UChicago, seeks to implement, evaluate, and refine **The STEM Career Prep Logic Model** (The Model). The Model brings together more than 25 large, diverse companies to engage high-need teens in transformational experiences that prepare them for STEM careers. The Model meets EIR's **Absolute Priority 1 (Rationale)** through a logic model that integrates WWC-validated evidence and **Absolute Priority 3 (Field-Initiated Innovations-STEM)**, including **Competitive Priority 1 (Expanding access to and participation in rigorous computer science coursework for traditionally underrepresented students)**, by developing students' STEM, career readiness, and social-emotional skills (SEL) through a multi-pronged experience, including student-led/corporate-coached STEM challenges.

Lumity and partners will pilot and test The Model in three Chicago schools engaging **650 high-need students (83% of whom receive free/reduced lunch, and 76% of color including Latinx, up to 50% female and/or students struggling academically)** in two cohorts throughout their 4 years of high school. Additionally, more than a 1,000 students will be reached by the project during the grant timeframe, if funded, as the partners continue to engage each Cohort of students as they enter 9th grade and move through the schools during the five years of the grant.

Model components:

- **Computer Science courses** teach students critical STEM skills through the College Board-recognized CS Principles curriculum designed by Code.org.
- **STEM Career Readiness (SCR) Curriculum that builds STEM, career and SEL** skills through interactive and challenge-based classroom lessons in core content areas and providing reinforcement during **Summer Programs** following grades 9 and 10.
- **Real World Problems** in which students apply STEM, career readiness and SEL learning from their Computer Science courses and SCR lessons to develop STEM solutions for student-defined challenges. Students engage in challenges with corporate STEM volunteers at school through **Real World Projects** and during **1-Day Challenges**, hosted by corporate partners on-site, in which student teams present their STEM solutions to STEM leaders.
- **STEM Talks** that connect students with STEM leaders in active conversations about their experiences and create student-leader career networks for post-secondary opportunities.
- **Career Site Visits**, hosted by corporate partners, engage students in interactive experiences, leading to job shadowing and internship opportunities during 11th and 12th grades.

Expected outcomes. Short-term: 1) Improved academic success: on-track to graduation (course credits) and post-secondary (SAT scores); 2) Improved SEL: truancy and discipline referrals; 3) Improved career awareness: pre/post surveys. Long-term: Increase the % of students that pursue and complete 4-year college and/or specialized training (70% and 75% respectively) and that have STEM-related careers (25%).

Partners: CPS, more than 25 corporations (e.g., Google, Accenture, Blue Cross/Blue Shield, etc. Full list included in *Appendix*), and Outlier Research and Evaluation/UChicago STEM Education.