Project Title: Soft Skills in Computer Science Pathways

Type of Grant & Priorities: **Early-Phase Grant** for **Absolute Priorities 1** (Demonstrates a Rationale) **and 2** (Field-Initiated Innovations – Promoting STEM Education, With a Particular Focus on Computer Science) and **Competitive Preference Priority 1** for projects designed to improve student achievement or other educational outcomes in computer science.

Students Served: This project will serve a total of 500 11th and 12th grade students attending open enrollment public schools in New Orleans, Louisiana. We define high-need students as those who are economically disadvantaged, as defined by the Louisiana Department of Education (LDOE).

Project Description: YouthForce NOLA ("YouthForce") seeks $3,996,263 to implement its Soft Skills in Computer Science Pathways program in New Orleans high schools, in partnership with local training providers. The Soft Skills in Computer Science Pathways program will pair the soft skills needed for success in the workplace with the Computer Science skills needed to succeed technically in a software or cybersecurity role, in order to fully prepare high-needs, largely Black New Orleans public school students for a career in a Computer Science field. YouthForce NOLA will support New Orleans's two leading Computer Science providers in integrating soft skills into their high school programs to increase employment prospects for participating students. Both providers (Operation Spark or "Op Spark", which trains students in software development and Spark Mindset, which trains students in cybersecurity and networking) offer year-long courses. Op Spark's programs prepare New Orleans public high school students with little to no prior coding experience for software industry jobs through a combination of technical training, student support and job placement services, and soft skills

training. Since 2017, Spark Mindset has prepared high school students for cybersecurity careers through a virtual or hybrid program. Both providers feature rigorous Computer Science instruction that lead to recognized industry-based credentials (Fundamentals of Javascript, Functional Programming and Web Development Levels 1, 2, and 3 for Op Spark, and CompTIA Network + (Year1) and Security+ (Year 2)) for Spark Mindset). Since 2015, YouthForce has supported high schools, workforce training providers, community organizations, and employers in teaching and reinforcing the soft skills needed for the workplace, using the framework of the MHA Labs Building Blocks. YouthForce will integrate its employer informed and validated soft skills training (teacher fellowships, professional development for provider teachers and staff, and an online library for teachers, staff, students and families), into both providers' training in order to better prepare participants for immediate entry into the workforce. YouthForce will also support both providers in growing their student support (case management, job placement) services to serve larger student cohorts.

Objectives and Expected Outcomes: (1) *Student Support Outputs:* Enroll 500 students over 60 months, and (2) 50% of students participating in the program will either: gain full-time employment in "promising jobs" or "good jobs" in computer science or STEM, or attend a college/university within two years of program completion[1]; (3) *Computer Science Outputs:* 80% of students who sit for certification exam in Computer Science will pass for all program courses; (4) *Soft Skills Outputs:* 80% of students will demonstrate proficiency in at least three of the six Soft Skills Building Blocks (as measured through tool refined by YouthForce, providers and MDRC) and (5) *Impact Evaluation Outputs*: YouthForce NOLA and its partners will

[1] "Promising jobs" are defined as paying a living wage or higher, including benefits, and offering the potential to advance to a "good job" within two years. "Good jobs" are defined as paying the regional median wage or higher, including benefits, and involving advancement potential.

produce a publishable study on the effects of Soft Skills in Computer Science on students' high school and career readiness outcomes, as compared to students not enrolled. *Outcomes:* (1) Students show increased readiness for promising or good CS or STEM jobs, as shown through an increase in the numbers and of students earning a certification in CS; (2) More students graduating having taken the program gain full-time employment in "promising jobs" or "good jobs" in CS or STEM or are attending a college within two years of program completion; (3) More New Orleans public school graduates are employed in promising or good CS or STEM jobs. This leads to more racial and economic equity in New Orleans.

Special Features: YouthForce is a unique non-profit intermediary that connects schools, training providers, students and families, and employers in a city where the school system is 100% charter schools. Operation Spark is a New Orleans based non-profit training aimed at providing young adults with software development and teamwork skills needed to enter the software development field. Spark Mindset launched in 2017 to equip high school students to gain high-value technical computer science IBCs, particularly in cyber security.

Partners: YouthForce's partners on this grant all have written their support, attached in Appendix C. They include elected officials (U.S. Representative Cedric Richmond, the City of New Orleans), local and state departments of education (Louisiana Department of Education, NOLA Public Schools), local charter management organizations (Collegiate Academies, KIPP New Orleans, InspireNOLA Charter Schools), regional economic development organizations (GNO, Inc., New Orleans Business Alliance), representatives of families and communities (Urban League of Louisiana), and local employers (Lucid, LLC and Ochsner Health System). They also include the core partners on the program, MDRC, Operation Spark and Spark Mindset.