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Executive Summary

Partners for Education at Berea College will place 20 AmeriCorps Members, who will provide tutoring and homework assistance in Algebra while connecting mathematics to STEM (Science, Technology, Engineering, and Mathematics) career pathways, in three high schools in Madison County, Kentucky. At the end of the 1st program year, the AmeriCorps Members will be responsible for improved academic results in mathematics and improved understanding of STEM career pathways. In addition, the AmeriCorps Members will leverage an additional 20 STEM professionals who will serve as mentors and share their educational and career journeys within the STEM field.

This program will focus on the CNCS focus area of Education. The CNCS investment of \$266,000 will be matched with \$160,295 of local, state, and federal public funding.

Rationale and Approach/Program Design

a. Problem/Need: Partners for Education at Berea College is a department within Berea College focused on improving educational outcomes -- academic achievement in math and language arts, high school graduation rates and college going and success rates -- in rural Appalachian Kentucky. Partners for Education, Madison County Schools and Berea Community Schools have come together to design PartnerCorps STEM, a program that utilizes AmeriCorps Members as mathematics tutors, college guides and STEM advocates. PartnerCorps STEM Members will consistently connect the mathematics curriculum of the high school classroom to STEM careers in the real world. As a result, we will improve student outcomes in high school mathematics and increase knowledge of the educational pathways to STEM careers.

Our partner high schools have an infrastructure in place for collaborating with Berea College. Leadership is committed to ensuring all students achieve at high levels, prepared to make systemic changes necessary to support PartnerCorps STEM, and committed to financially support the program. Current collaborations with our partner schools include a U.S. Department of Education Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) and placement of Berea College students in the schools as mentors. Partner schools are not served by a national service program in this capacity.

NEED=HIGH POVERTY: Within Madison County (KY), poverty levels and unemployment rates are high. In our community, 20.3% of persons live below the poverty level, or 7% more than the nation's rate of 14.3% (U.S. Census Bureau, 2007-2011 American Community Survey), and 22.8% of all children under 18 live in poverty, whereas 20% of children live in poverty in the U.S. (U.S. Census

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Bureau, 2007-2011 American Community Survey). The unemployment rate for the county is 8.4%, 1% higher than the national rate of 7.3% (October 2013, Bureau of Labor Statistics State Report).

NEED=HIGH SCHOOL STUDENTS ARE NOT AT GRADE LEVEL IN MATH: Kentucky requires all high schools to administer an end of course (EOC) assessment at the end of Algebra II. Few students in our county are scoring proficient or distinguished - at or above grade level - on the Algebra II EOC assessment. Only 34.2% of Madison County students scored proficient or distinguished on the Algebra II EOC assessment (KDE, Spring 2013). Even more alarming, at Berea Community, only 6.3% of students scored proficient or distinguished on the Algebra II EOC (KDE, Spring 2013). In Kentucky 36% of all students scored proficient or distinguished on Algebra II EOC assessments.

Further analysis of our school level data shows that our low-income students, those who qualify for free and reduced lunch, are achieving at even lower levels in math. Of those students who qualify for free and reduced lunch, only 25% of Madison County students and only 5.1% of Berea Community students were at or above grade level as measured by the Algebra II EOC.

NEED=STUDENTS NOT ON TRACK TO BE COLLEGE READY IN MATH: All 10th and 11th grade students in Kentucky are assessed using PLAN and ACT assessments, respectively, to predict their college readiness level. College ready students have a 50% chance of getting a B or better in the first credit-bearing college course within the content area. In Kentucky, students ready for college math as measured by the ACT are not required to take remedial math courses in college. They immediately move into a credit bearing college Algebra course.

Our two Madison County high schools enroll 2,756 students in grades 9 -- 12. Only 28.5% of 10th graders and only 38.7% of 11th graders were at college readiness benchmark in math (KDE, Spring 2013). Berea Community High School enrolls 225 students in grades 9 -- 12. The numbers at Berea Community were even more disturbing, with only 18.4% of 10th-graders and only 33.8% of 11th-graders at college readiness level (KDE, Spring 2013). Nationally, 35% of all 10th graders and 40% of all 11th graders are at college readiness level in math (ACT Condition of College and Career Readiness, 2013).

A school level disaggregation of PLAN and ACT data by income level shows that even fewer of our low income students are at college readiness level in mathematics. In the Madison County schools, only 16% of 10th-graders and only 27% of 11th-graders were at college readiness in math. At Berea Community School, only 9.8% of 10th-graders and only 26% of 11th-graders were at college readiness in math.

NEED=COLLEGE ATTENDEES NOT COLLEGE READY IN MATH: Only 60% of our high school

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graduates attend college. The majority of our graduates who attend college are not ready for college-level math, thus, they must pay tuition for non-credit bearing remedial math courses. Sixty percent of the Class of 2011 graduates from our county were required to take remedial math courses in college as compared to 55% of Kentucky 2011 graduates (2013 Kentucky High School Feedback Report).

b. Measurable Community Impact: GAPS IN SERVICES HAVE BEEN IDENTIFIED AND WILL BE ADDRESSED BY MEMBERS: PartnerCorps STEM Members will focus on improving educational outcomes in mathematics in our high schools. Berea College staff and the leadership of our partner schools reviewed school data and interviewed administrators, counselors and teachers. From this comprehensive needs assessment we identified significant gaps in services that contribute to lack of achievement in mathematics. These gaps include: insufficient in-school tutoring in Algebra I and Algebra II courses; insufficient before and after school homework assistance focused on Algebra I and Algebra II; and lack of intentional connections between understanding math concepts and success in STEM careers.

AMERICORPS MEMBER ACTIVITIES: Working collaboratively with our schools, we have designed a program that meets the identified needs of our students and that will support improved academic achievement in mathematics. A research-based, continuous improvement assessment model will ensure that our services have the desired impact. PartnerCorps STEM will result in increased mathematics achievement in our high schools.

In designing PartnerCorps STEM, attention was paid to the areas where Members could be most effective in filling gaps in services. The use of Members is a suitable and effective means for accomplishing objectives that we could not otherwise accomplish through existing staff and volunteers. Rural schools suffer from a lack of available volunteers and current fiscal times have resulted in fewer staff and faculty within our schools. PartnerCorps STEM Members will prove to be a valuable resource and will be a critical player as we partner to improve educational outcomes. PartnerCorps STEM Members will meet the identified needs by providing the following services designed to have measurable impact:

SERVICE PROVIDED=IN-SCHOOL TUTORING: PartnerCorps STEM Members will be imbedded within Algebra I and Algebra II courses at each of our high schools. The Members will provide in-class tutoring and assistance to students during class. Algebra I and II courses often have more than 25 students in each class. PartnerCorps STEM Members will provide the classroom teacher a critical in-class resource. Members will make it possible for the teacher to differentiate instruction and remain confident that all students are being assisted.

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SERVICE PROVIDED=OUT-OF-SCHOOL TUTORING: Out-of-school tutoring and homework help sessions will be scheduled before school and after school at least three times per week. Real time data will be used 1) to target out-of-school tutoring to students who need assistance and 2) to ensure tutoring is provided on the specific Algebraic concepts with which the student needs assistance.

SERVICE PROVIDED=CONNECTING STUDENTS TO STEM CAREER PATHWAYS: Members will serve as college guides and STEM advocates and will provide information on STEM careers and educational planning to students both on an individual level and at a school level. Working in teams, Members will develop and implement units that address STEM careers and educational planning. These units will be integrated into the school's college and career readiness course that all 9th-graders take. Members will support the evidence based Advanced Placement Training and Incentive Program (APTIP) to ensure all students understand the importance of taking Advanced Placement STEM courses.

SERVICE PROVIDED=CONNECTING STUDENTS WITH STEM PROFESSIONALS: Members will connect with local and regional STEM professionals and invite STEM professionals into classrooms to share their educational journey and career pathway with students. STEM mentors will be sought for students who qualify for free and reduced lunch and who express an interest in STEM careers. Mentors will provide students with guidance and job shadowing experiences. Members will collaborate and host a STEM career fair each year on a local college campus. Schools will bus students, including all Algebra students, to the career fair to ensure that all students have the opportunity to participate. Members will engage professionals who work within the STEM field as volunteer speakers and presenters. These volunteers will provide students with real life connections to STEM careers and will share the linkages between math proficiency and STEM careers.

SERVICE=PARENT PARTNERSHIPS: It is critical that parents, or those serving in the parent role, be engaged as educational advocates. Members will develop relationships with the parents of their Algebra I and II students with particular focus on connecting with the families of students identified as low-income. Parents will be invited to the STEM career fair and to parent workshops. Working as teams, Members will develop parent workshops around topics such as assisting your child with math, understanding STEM careers, and understanding the APTIP program and the Advanced Placement STEM courses provided within the schools. These workshops will be provided during school open houses and at community locations and events. In addition, Members will serve as part of the school's FAST (Families and Schools Together) team and work intensively with those families identified as having the most need.

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Using the Berea College online database, Members will document all activities and services provided to students.

As a result of PartnerCorps STEM, educational outcomes in mathematics will improve for high school students as measured by: 1) increased number of students scoring proficient or distinguished on the Algebra II End of Course Exam; 2) increased number of students at college readiness level in math by 10th grade as measured by PLAN; and 3) increased number of students at college readiness level in math by the 11th grade as measured by the ACT. PartnerCorps STEM addresses national performance measures ED2 and ED5.

Evidence Base: Partners for Education presents a framework based on strong evidence. We present an evidence base that can support causal conclusions with the highest level of confidence.

Foundational to PartnerCorps STEM is the Advanced Placement Training and Incentive Program (APTIP). APTIP has well-designed and well-implemented experimental studies conducted on the proposed program with positive findings on one or more intended outcomes. Our partner, AdvanceKentucky, is implementing APTIP with fidelity within Madison County Schools.

PartnerCorps STEM Members will be actively engaged in the APTIP program.

ADVANCED PLACEMENT TRAINING AND INCENTIVE PROGRAM: The National Math & Science Initiative (NMSI) Advanced Placement Training and Incentive Program (APTIP) uses the College Board Advanced Placement curriculum and exam as a framework that provides students with high academic content, standards, and assessments. AP courses offer nationally recognized rigorous curricula and objective assessments with strong positive outcomes for students. Research shows that passing AP exams positively impacts college matriculation and graduation (Geiser, Saul, "The Role of Advanced Placement and Honors Courses in College Admissions,"

<http://cshe.berkeley.edu/publications/docs/ROP.Geiser.4.04.pdf>). Studies find that an AP course that culminates in an AP exam grade of 3 or higher has a significant, positive impact on a student's likelihood of college success among academically comparable students. A high-quality, AP course in high school fortifies students for a successful transition into, and ultimately graduation from, college. APTIP empowers high need, traditionally underrepresented students to succeed in rigorous courses, thereby elevating schools' expectations for their students and transforming schools' cultures into ones of college-readiness. APTIP supports students and teachers by providing intensive AP and pre-AP teacher training, teacher and student support, vertical teaming, open and encouraged enrollment in AP courses, financial incentives based on academic achievement, specific and individualized annual achievement goals, and robust data collection to ensure accountability at all levels.

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Two quasi-experimental studies examined the impact of APTIP, and found positive effects (Jackson, Kirabo. "A Little Now for A lot Later: An Evaluation of a Texas AP Incentive Program," *Journal of Human Resources*, 2010. Jackson, Kirabo. "A Stitch in Time: The Effects of a Novel Incentive-Based High-School Intervention on College Outcomes", February 2010. *Intervention on College Outcomes*, May 4, 2010, paper <http://www.nber.org/papers/w15722>). This research confirms that expected outcomes of APTIP are: (1) significantly increased numbers and diversity of students taking AP math, science, and English (MSE) exams and scoring 3 or higher, and (2) increased college enrollment and persistence, especially for traditionally underrepresented students.

Partners for Education has a comprehensive plan of interventions designed to improve mathematics outcomes in our partner high schools. APTIP is one piece of our plan and PartnerCorps STEM Members are a vital piece of our APTIP plan.

Our services have been greatly informed by research and effective practices. We have adopted and refined a research-based framework for delivering services with supporting activities that reflect generally accepted best practices for engaging low-income students. Efforts focus on identifying activities that yield the most promising results. Following an exhaustive research and literature review and with input of students, parents, educators, partners and policymakers, Partners for Education developed a proactive response to our region's current educational pipeline. In addition to APTIP, we will replicate the research-based programs and practices described below.

USE OF COLLEGE AND CAREER READINESS (CCR) TARGETS AND BENCHMARKS: College and Career readiness performance targets are test scores that indicate a student is on track to be academically prepared for college by the time he or she finishes high school (Dougherty, NCEA, 2008). Once college and career readiness performance targets have been set, students can be divided into academic preparation groups and services can be targeted to students based on college and career readiness performance targets and the size of the students' academic preparation gaps.

We use the ACT College Readiness Benchmarks -- EXPLORE/8th grade, PLAN/10th grade, ACT/11th grade. The Kentucky Department of Education will provide us with ACT College Readiness Benchmarks for each Algebra I and Algebra II student. Site Coordinators will work with Members to define a path to College and Career Readiness for each student and ensure that Members are providing the interventions necessary to keep our students on track for college and career readiness.

FAMILIES AND SCHOOLS TOGETHER (FAST): FAST is an evidence-based practice with a record of success with parents from low-income, rural backgrounds (Caspe & Lopez, *Lessons From Family-Strengthening Interventions: Learning From Evidence-Based Practice*, Harvard Family Research

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Project, 2006). FAST empowers parents in multi-family groups held after school, builds relationships among parents and between families and schools, enhances the parent-child bond, and improves family cohesion.

FAST is listed in the National Registry of Evidence-based Programs and Practices of the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA, 2008) and has been identified by the U.S. Department of Education (1998) and the U.S. Office of Juvenile Justice and Delinquency Prevention (2006) as an exemplary, research-based model program.

Existing experimental research establishes the effectiveness of the FAST program in engaging parents and supporting the development of young students' social skills and academic competence while reducing aggression. These findings give strong reason to believe that the FAST intervention will serve its purpose: to break down the barrier of parent disengagement by empowering parents, strengthening social networks and improving family cohesion, leading to better behavior and enhanced academic performance for children.

FAST will be implemented within our PartnerCorps STEM high schools to engage parents who have been alienated from the schools and to provide them with the information needed to support their children in secondary success and college going. Partners for Education have implemented FAST for over five years in similar rural, Appalachian schools. We have had success in recruiting parents to participate in the program. PartnerCorps STEM Members will be active members of the FAST teams and will assist in recruiting parents, particularly parents of students who have expressed an interest in STEM careers.

c. Member Training: PartnerCorps STEM will begin with a three-day orientation in September 2014. To leverage resources, we will use trainers from Berea College and our partners. The first day will focus on "AmeriCorps 101": information related to service and service history, prohibited activities, administrative procedures, ethics and compliance and service activity training. Trainers will include professionals from Kentucky Campus Compact and Save the Children, organizations with extensive experience with CNCS programs.

The second day will focus on "Math and STEM Competencies," including understanding STEM career pathways and developing skills as an effective mathematics tutor and career guide. Our schools, the Kentucky Department of Education and AdvanceKentucky will provide information on rigor within STEM, the response to intervention (RTI) strategies within STEM, Kentucky Assessment, and college and career readiness planning. Attention will be placed on training all Members as tutors using a tutor curriculum developed in collaboration with schools and consistent with Common Core State

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Standards. FAST and AdvanceKentucky will present their evidence-based programs. Berea College will introduce Members to our online longitudinal student database and provide training on how to utilize the database to access student information and to record services.

The third day, "Service and Reflection" will focus on developing an ethic of service and reflection. It is critical that Members be oriented to the AmeriCorps and Berea College commitment to service.

Members, partners and Berea College staff will participate in a service project and guided reflection.

Continual training will occur on a weekly basis. Each Friday, the Project Coordinator will facilitate, "Friday Morning Reviews," a three-hour session where Members are provided additional training, time to review student data and interventions with educators, and an opportunity to voice and troubleshoot questions Members may have about interventions and their effectiveness. "Friday Morning Reviews" will be data driven and Members will be continually provided with data on mathematics achievement of the students in their courses. This data will be reviewed at the Friday meetings and certified mathematics instructors will be on hand to assist Members in developing interventions appropriate to each individual student's needs.

As Members work on STEM professional volunteer recruiting, mentoring and the annual STEM Career Fair, "Friday Morning Reviews" will focus on recruitment of volunteers and volunteer training. Guidelines will be provided for Members on appropriate screening of volunteers as well as processes to ensure volunteers are aware of prohibited activities.

d. Member Supervision: Our supervision plan and our training plan are woven together. As concerns or challenges arise, staff will work to solve the problems and will share the lessons learned with Members (see detailed staff descriptions on page 8).

The Project Coordinator will work collaboratively with school representatives to ensure that all Members are adequately supervised and that all Members receive the training and support necessary. Upon notification of funding, school leadership will designate a Site Coordinator for each school, most likely the lead mathematics teacher or an assistant principal. The Site Coordinator will serve as an on-site supervisor and will ensure that Members are completing their service hours and activities on schedule.

The Site Coordinators will work closely with the Project Coordinator to ensure that the program runs smoothly. Together they will design and implement the "Friday Morning Review" and deal with any performance issues that occur. On a weekly basis, the Site Coordinators and the Project Coordinator will touch base to ensure the program is meeting identified goals and objectives and to address any issues and concerns in a timely manner.

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Within their school, Members will meet regularly as a school team. The Site Coordinator will be the front line support to the Members and will ensure the Members are supported and that they are providing the necessary services and interventions. Teams will check in daily before school for 15 minutes, providing opportunities for the Site Coordinator to offer feedback to the Members and identify any issues for follow-up or any areas where training is needed.

During the "Friday Morning Review," all Members will meet with the Site Coordinators, the Project Coordinator and Berea and school leadership. During these meetings, key service activities and interventions will be assessed and modifications will be made as needed, administrative procedures will be reinforced and regulations regarding prohibited activities will be reviewed. This weekly model of continual follow-up is utilized effectively in our AmeriCorps School Turnaround program. Our school leaders were introduced to this continual training and supervision model during project planning and were emphatic that "Friday Morning Review" be included in this PartnerCorps STEM program.

Topics to be covered during "Friday Morning Review" throughout the year range from sessions on working with our target population, to hands on trainings about effectively facilitating groups, to a detailed session on how to plan a STEM career fair.

e. Commitment to AmeriCorps Identification: We will establish a PartnerCorps STEM brand that incorporates the AmeriCorps logo and brand. Our uniforms will include the AmeriCorps logo and the logo will appear on the PartnerCorps webpage, brochures and materials. Our partner schools will include pages on their school websites promoting the program and will include the AmeriCorps logo.

Organizational Capability

a. Organizational Background and Staffing: Berea College, an independent, non-denominational college, provides a high quality education with a liberal arts foundation. Since the late 1800's, Berea College has partnered with Appalachian communities to provide educational opportunities to low-income youth.

Partners for Education at Berea College leverages the college's resources to improve educational outcomes in rural Appalachia. Current Partners for Education programs include AmeriCorps School Turnaround, GEAR UP, Upward Bound Math and Science, Talent Search, Investing in Innovation (i3), and Promise Neighborhood. Our i3 program focusses on implementing APTIP within high-poverty high schools. With a staff of over 140 professionals working in eighteen Appalachian Kentucky counties and an annual budget close to \$18 million, Partners for Education has the organizational capacity to effectively and efficiently administer this AmeriCorps program. Currently,

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Partners for Education implements an AmeriCorps School Turnaround program that places 40 full-time AmeriCorps members in three low achieving high schools focused on improving educational outcomes for low-income rural youth.

PRINCIPAL INVESTIGATOR (PI): PartnerCorps STEM will be located within the Grant Services and Compliance division of Partners for Education. Heather Dufour, Director of Grants Services and Compliance, will serve as PI and will devote 25% of her time to this project. As PI, her responsibilities will include articulating PartnerCorps STEM's strategic direction and theory of change, facilitating the partnership between Berea College and school partners, and aligning the program to other initiatives. Ms. Dufour serves on the Partners for Education Senior Leadership Team, serves as PI for our AmeriCorps School Turnaround grant, coordinates our sub-grantee contracts for our Kentucky College Coach AmeriCorps members and for our VISTA members, and is coordinator for the department's college work-study program. Ms. Dufour has received training in grants management and fiscal management from CNCS and is familiar with the mission and goals of the AmeriCorps program. Ms. Dufour has a Master's Degree in Business Administration with considerable experience in business, human resources and education. Ms. Dufour's leadership position, experience and education will ensure that PartnerCorps STEM seamlessly fits within our organization and the program is implemented with fidelity.

PROJECT COORDINATOR (100% FTE): Upon notification of funding, Berea College will begin a search for a full-time, 12-month Project Coordinator (PC). The PC will be based at Berea and has responsibility for the management of the project and for developing and refining program operations, to ensure that objectives are met and to ensure that the program is in compliance with the CNCS guidelines. The PC manages the daily operation of the program by recruiting, supervising, training, and guiding Members in the development, implementation and evaluation of program activities. The PC reports to the PI. Qualifications include: a minimum of five years with grant management, familiarity with national service programs, knowledge of best practices within the education arena, extensive supervision experience and administrative experience including budget management and event planning. A Bachelor's degree is required for this position, but a Master's degree is strongly preferred.

ADMINISTRATIVE ASSISTANT (100% FTE): Upon notification of funding, Berea College will begin a search for a full-time, 12-month Administrative Assistant (AA). The AA will be based at Berea and will provide administrative support in all recruitment activities including updating the website and social media sites. The AA manages the daily flow of information to the Members and assists in

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collecting and maintaining information to support Members and to support the progress toward Performance Measures. The AA will provide Members with assistance needed with the database and the AmeriCorps system. The AA reports to the PC. Qualifications include: a minimum of five years with experience working in an office including experience with online databases. A Bachelor's degree is preferred for this position, but extensive relevant experience may be substituted.

SITE COORDINATORS (SC): School leaders will appoint a Site Coordinator at each school. It is likely that the SC will be the lead mathematics teacher or an assistant principal. Site Coordinators will receive a stipend to compensate them for their extended service (see Budget Section F). The SC will serve as the primary on-site supervisor, attend Friday trainings and ensure that Members are completing their service hours and activities on schedule. The SC will ensure that Members are integrated within the school, have access to students and student data and are mainstreamed into the work of the school.

Based on previous experience implementing AmeriCorps grants in partnership with rural Appalachian schools, we have developed an extensive plan for effectively managing PartnerCorps STEM. Policies and procedures are in place for background check procedures, recruiting, data collection, recordkeeping and reporting -- financial, student, and service. Berea College personnel, financial, and management policies are in place to ensure compliance with all federal and state regulations. In compliance with federal regulations, all personnel will maintain time and effort logs. Logs will be turned in monthly to the PI, reviewed, signed and filed in the Grant Services office. At the school level, each Site Coordinator will review and sign the Member's time and effort logs and submit to the PC.

All staff will stay up-to-date on current research and best practices in their specialty. Staff will participate in trainings conducted by CNCS, Kentucky Department of Education, ACT, AdvanceKentucky and other credible service providers.

Partners for Education at Berea College has significant experience administering federal funds. In addition to our AmeriCorps School Turnaround program, our portfolio includes six U.S. Department of Education grants, one Office on Violence Against Women grant and one Department of Justice Grant. We also have contracts with Save the Children to place 12 VISTA members each year and with Kentucky Campus Compact to place 5 Kentucky College Coaches each year. We conduct annual A-133 audits and have met all federal guidelines in regard to compliance, fiscal and programmatic. If received, this funding would equal less than 5% of the Partners for Education annual operating budget.

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Within Partners for Education, we have strong program, fiscal and grants management leaders. We have the organizational knowledge to ensure effective implementation of this AmeriCorps program.

b. Compliance and Accountability: Berea College Partners for Education has experience implementing an AmeriCorps national direct program. We are committed to complying with all applicable federal, state, and local laws and regulations. We maintain a culture promoting stewardship and compliance to ensure funds are managed with transparency and integrity. Our commitment to compliance and accountability includes: 1) instituting and reviewing annually operational policies and procedures for purchasing, conflicts of interest and grant reconciliation; 2) providing training and offering grants management education to employees on a regular basis; and 3) conducting annual audits including A-133 audits, internal audits and periodic departmental audits.

Within PartnerCorps STEM, special attention will be placed on ensuring that Members and all staff and partners are aware of prohibited activities. Not only will trainings regularly visit the topic of prohibited activities, site visits and program reviews will ensure that no Members are participating in prohibited activities.

The Project Coordinator will be responsible for monitoring site compliance with fiscal and programmatic requirements. Each host high school will be asked to sign off on a scope of work established by Berea College. The scope of work will clearly describe the roles and responsibilities of each person involved. The Project Coordinator will conduct site visits to monitor Member activities and to ensure compliance with all federal and state regulations. Schools will be responsible for confirming Member service hours by signing the Member time log. Time logs will be sent to the Project Coordinator who will review them and include them in the Member files.

c. Past Performance for Current Grantees and Former Grantees Only: Partners for Education at Berea College has a national direct AmeriCorps School Turnaround program. We are five months into our first year of programming.

d. Continuous Improvement: We have developed and will implement a continuous improvement and assessment model to refine services and service delivery to ensure that we continuously meet project goals and objectives. 1) All services will be evaluated using facilitated debriefings, online surveys, and pre/post-tests. Results from this continual evaluation of services will be synthesized by the Project Coordinator and shared with all staff on a quarterly basis. Data will be used to refine services and service delivery. 2) Annually, all stakeholders - students, parents, staff, school personnel and partners - will provide feedback on the program, recommend new services and suggest services that may no longer be needed. The evaluator will utilize focus groups, interviews and online surveys to collect this

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information. 3) All school partners have agreed to share individual, student-level data with us, including EPAS scores and assessment. The Project Coordinator will continuously review student data to ensure students receive appropriate services and services are having the desired impact. Annually, the evaluation design will be revisited by the Evaluator, Project Coordinator, and staff to ensure that the evaluation is meeting the needs of the program. The collection and effective use of both quantitative and qualitative data is essential in demonstrating the efficacy of PartnerCorps STEM, assessing student outcomes, and taking immediate action toward improving student performance.

Cost Effectiveness and Budget Adequacy

a. Cost Effectiveness: A one-year budget detailing annual expenses is included with the proposal. The cost of the program is reasonable compared to the long-lasting, systemic change expected. All costs are reasonable and linked to allowable activities under the program components. The budget is reasonable in relation to the number of students served and provides a cost-effective solution for reducing the achievement gap of students living in poverty. Our cost per MSY is \$13,300. Our student service cost is less than \$275 per student which is adequate to ensure students receive intensive, individualized services necessary and reasonable given the potential impact on student academic achievement.

The budget was prepared using Berea College's mature costing and purchasing principles. The budgeted costs do not supplant existing funding streams and the budget and cost analyses were prepared on the basis of actual costs, vendor quotes for goods or services and/or targeted research conducted for the specific purpose of effectively preparing and managing the grant budget. Detailed financial records are maintained onsite to satisfy reporting requirements and financial audits. The project budget is sufficient to implement the planned services and activities described in the project plan. The project includes support from partnering schools and community stakeholders. These collaborative efforts allow for program sustainability when federal support is no longer available. Budgeted costs for salaries and wages are based on information from the Bureau of Labor Statistics for the state of Kentucky and Berea College's benchmarking process for similar positions. Fringe costs are based on Berea College's current fringe rates. Travel and training costs are based on research on the General Services Administration (GSA) website for standard rates, travel websites and on prior costs from previous travel and training events. Supplies are based on actual costs from vendors. Evaluation costs are based on proposals and quotes from vendors and on similar contractual agreements from other projects. Other program costs and Member support costs are based on actual

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vendor quotes, research specifically conducted to determine the cost or costs from similar activities conducted in other projects.

b. Budget Adequacy: We have secured match commitments from Madison County Schools of \$150,000, \$10,000 from Berea Community School, and \$295 from Partners for Education at Berea College. See attached letters for financial contribution of partner schools. Additionally, throughout the grant term we will collaborate with a diverse group of local, state and national organizations such as AdvanceKentucky, Kentucky Department of Education, Kentucky Campus Compact and Save the Children to provide continuing support of the project. During the capacity building period, we will recruit volunteers and develop instructional and training resources for ongoing project sustainability and we will assist the partners with exploring other funding options.

The budget is designed to address gaps and weaknesses in services, infrastructures and opportunities for students living in poverty. The budget is sufficient to meet the stated goals and objectives and proposed costs are necessary to provide the interventions discussed in the project narrative.

Evaluation Summary or Plan

N/A

Amendment Justification

N/A

Clarification Summary

Budget Clarification

1. Please explain how criminal history check costs for staff members are covered in the budget.

The costs for criminal background checks for Berea College staff are paid by the college as part of the hiring process.

Programmatic Clarification

1. Please describe how the program will recruit AmeriCorps members with educational backgrounds that will allow them to be successful tutors of high-school algebra and STEM career coaches. Please also confirm that the members will meet minimum qualification requirements to serve as tutors and will be supervised by individuals with expertise in tutoring, as required by 45 CFR 2522.910 - .940.

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Berea College has strong science, math, computer science and nursing programs that provide a pool of well-qualified applicants and STEM role models. Partners for Education at Berea College partners with regional colleges and universities to recruit AmeriCorps members for our School Turnaround program. These relationships with colleges and universities will be utilized to recruit PartnerCorps STEM members. For example, one strong partner is the STEM-H Institute at Eastern Kentucky University (EKU). We will recruit graduates from this program in addition to the college students who have participated as STEM mentors and tutors at EKU. In addition to recent college graduates, we will recruit retired educators as members. This strategy has been effective in our AmeriCorps School Turnaround program. Our recruitment for PartnerCorps STEM will target retired teachers who taught in STEM content areas.

Partners for Education has developed a tutor training program to support our educational outreach programs. The tutor training program will be utilized to train and support PartnerCorps STEM members. Our departmental tutor training is supplemented by a series of online training videos and professional staff. Certified teachers and college access program staff created the videos which are linked to internet-based resources and research. The videos and resources cover tutoring best practices and outline the processes for supervision and reporting of school-based tutors placed by Berea College.

With a history of providing high-quality professional development and close ties to regional STEM educators and training organizations, Berea College's Partners for Education is well placed to provide the specialized high-quality and research based tutor training required of AmeriCorps grantees.

2. Please describe the resources within the target community with respect to STEM professionals that may be leveraged as volunteer mentors and speakers. What STEM-related organizations are available locally or regionally that AmeriCorps members can reach out to for recruitment of volunteers? Have these organizations expressed willingness to support the program in this capacity?

*AMSTEMM is a program that provides a community environment, a network of support services and numerous academic enhancement opportunities to undergraduate students at the University of Kentucky. AMSTEMM serves those students who are underrepresented in the science, technology, engineering and math (STEM) majors. This includes students who are from any Appalachian county or minority students. Ms. Suzanne Scheff, University of Kentucky AMSTEMM Director also works

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with the Kentucky Girls STEM Collaborative to bring together businesses and other organizations and individuals who are committed to informing and motivating girls to pursue careers in science, technology, engineering and mathematics. Ms. Scheff has committed to assist by linking our program with appropriate mentors for our schools.

*Eastern KY University STEM-H Institute's mission is to increase the number of K-20 students in the Commonwealth of Kentucky who are interested in and able to complete the degrees and/or preparation required to enter the Science, Technology, Engineering, Mathematics and Health (STEM-H) workforce. Dr. Jaleh Rezaie, with Eastern Kentucky University STEM-H Institute, will assist our program by providing mentoring opportunities and connections for our students.

*The Kentucky Engineering Exposure Network (KEEN) is a Kentucky Transportation Cabinet Program dedicated to teaching Kentucky's kids about engineering. KEEN is a unique partnership between the Commonwealth of Kentucky's school system and the Kentucky Transportation Cabinet. The KEEN Program places engineers employed with the Cabinet in classrooms all across Kentucky. KEEN provides an opportunity for the Cabinet and local schools to work together, allowing Transportation Cabinet engineers to interact with students in their own communities. In addition, the KEEN Program follows many of the same concepts required under Kentucky's Education Reform Act, including the Common Core of Learning concept and the application of basic skills in math and science as they relate to real life situations. These contributions to the education of our communities are brought to the classroom at no cost to the school. Tyler Mills is the coordinator for our service region and will work with us to provide these services to our students.

Through previous and current partnerships with Berea College Partners for Education, each of these programs are supportive of our efforts to provide mentoring, programming, and real world opportunities to engage in STEM activities with the youth we serve. We are continuing to discover more local, state, and federal resources, both private and public, that can be leveraged to increase our students' success in exploring STEM opportunities and pursuing STEM careers.

Performance Measure Clarification:

1. Please explain how all the students counted under ED2 will meet the criteria for economically disadvantaged as defined in the performance measure instructions for ED2.

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More than 50% of the students in Madison County are considered economically disadvantaged. In 2012 and 2013, more than half of the students received free and reduced lunch. Economically disadvantaged students score significantly lower on assessment scores than the rest of the population. Economically disadvantaged students scored approximately 10% lower on Algebra II end of course assessment scores in Madison County compared to the whole student population. (KY School Report Card, 2012-2013)

2.State standardized tests may only be used to measure ED5 if an exception has been granted by CNCS. For consideration of exception regarding the use of the PLAN and ACT tests administered by the State of Kentucky, please provide a justification that explains how the test is sufficiently tailored to the material taught, the timeline for obtaining test data in order to meet AmeriCorps reporting requirements, and why gains in the test are likely to be attributable, in part, to the efforts of AmeriCorps members and not the classroom teacher. The justification should also confirm that the test will be administered at the end of the prior year and again at the end of the current year or that the test includes a pre- and post-assessment administered at the beginning and end of the school year. (A post-test only option can be requested the program can demonstrate that it is serving below-grade-level students and has a sufficient reason for not conducting a pre-test/post-test.) The justification should also describe what the test measures and why it is a better option than another standardized pre/post testing.

See updated performance measures.

3.For ED5, please specify the minimum level of improvement in academic achievement that will be required in order for a student to be counted under this measure.

See updated performance measures.

Strategic Engagement slots Clarification:

1.What percentage of your slots will be targeted to recruiting members with disabilities? What is your program's plan, if any, for outreach and recruitment of members of the disability community?

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According to the National Center for Education Statistics, approximately 7% of students enrolled in postsecondary education institutions reported a physical disability and approximately 31% reported a specific learning disability. Additionally, 18% reported an ADD or ADHD diagnosis and 15% reported a history of mental illness or a psychiatric condition, including Post-Traumatic Stress disorder. PartnerCorps STEM seeks to recruit college graduates and therefore will set a target of 25% of members who report one of the above mentioned disabilities.

Our largest target recruitment partners are Eastern Kentucky University, Berea College, and the network of regional Kentucky Community and Technical Colleges. We plan to meet with the Disability Services offices and key professors in relevant subjects at each of these institutions to encourage recruitment. In addition, we will ensure that our recruitment materials appear in accessible formats and represent a diverse range of potential members.

Healthcare Clarification Items for all applicants:

1. Please provide the name of the health insurance provider you are proposing to use to insure your AmeriCorps members.

Our program coordinates with the Kentucky Health Insurance Marketplace, known as Kynect, to reimburse members for Bronze level Minimum Essential Coverage (MEC). Most current AmeriCorps members qualify for little or no premium and do not require reimbursement. Members can also elect The Corps Network plan through Summit Insurance. We have kept this option for members who feel the reimbursement process might create a financial hardship. Members who elect The Corps Network have been advised that the plan does not provide MEC.

2. How did you select the provider? (for example, direct marketing, through the Health Insurance Marketplace or other means)

Members who register through the Kynect website choose from state approved providers. We had previously selected The Corps Network plan because the state commission and other Kentucky-based AmeriCorps programs used that network and we were included in the discount network rates.

3. Does your proposed budget for member healthcare provide for Minimum Essential Coverage (MEC)

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coverage, as defined by the Affordable Care Act (ACA), for your full-time members?

Yes, the proposed budget for member healthcare provides for MEC.

Second Round Clarification Items

- Based on a review of your cost effectiveness section, it has been determined that your funding request did not make a compelling case for the proposed cost per MSY. Please consider decreasing your overall cost per MSY by revising the CNCS share of the proposed program budget or explaining why the proposed program is cost effective in terms other than what exists in the original application.

All our costs are reasonable and linked to allowable activities under the program components. The budget is reasonable in relation to the number of students served and provides a cost-effective solution for reducing the achievement gap of students living in poverty. Our cost per MSY is \$13,300.

A MSY of \$13,300 is warranted by the PartnerCorps STEM program and is a very reasonable MSY given the rural location of our program and the fact that this will be a new program.

Geographic isolation is a major factor in Appalachian Kentucky. This isolation leads to increased transportation costs. No cost-efficient public transportation exists in our community. Staff must travel significant distances to meetings with partner organizations, for professional development, and to coordinate with regional colleges and universities. Even with our strict carpooling and travel guidelines, our budget is stretched by the rising gas prices and long commutes. Students must be transported by school bus to regional events. The costs of bus transportation continue to rise as the cost of gas rises.

Our rural nature impacts our training costs. Our annual training is 3 days and includes lodging and food. It is not feasible for our members to travel each day to a central location—transportation costs could easily exceed the costs for lodging.

Since our project is a new project, included in the proposed budget are start-up costs such as technology and supplies. These costs impact our MSY.

In fact, the actual costs of implementing PartnerCorps STEM exceed the MSY of \$13,300. As an institution we made the decision to absorb certain costs related to the program in order to keep the federal request to a MSY of \$13,300. For example, Partners for Education at Berea College is donating space, services, training resources and the considerable administrative oversight needed to implement

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the program with fidelity. We are absorbing costs such as background checks for full-time staff. We did not include other costs related to implementing a new program such as staff time for hiring and training new staff and developing administrative procedures.

- Your response to Programmatic Clarification item #1 does not specifically confirm that the AmeriCorps members will be supervised by individuals with expertise in tutoring, as required by 45 CFR 2522.910 - .940. In the Clarification Changes narrative, please describe how the program will ensure that all AmeriCorps member supervisors will have the required expertise in tutoring.

AmeriCorps members will be supervised by a designated school Site Coordinator, most likely the lead mathematics teacher or an assistant principal. Each Site Coordinator will be required to have expertise in tutoring. Preference will be given to candidates who demonstrate extensive experience in tutoring, such as involvement with extended school services.

- In the Performance Measures narrative, please describe how the MAP test that is now being proposed to measure ED5 (1) measures the types of student skills/knowledge the program is trying to improve through its efforts, (2) is appropriate for the grade level(s) served, (3) has demonstrated validity or reliability for the population you are serving, and (4) is compatible with, and acceptable to, the schools where the program is providing services.

Our PartnerCorps program is designed to improve our student's skills and knowledge of Algebra concepts so they will successfully complete Algebra 1 and 2 and meet the college readiness benchmark as set by the ACT test. The assessment tool that will be used is the Measures of Academic Progress (MAP) test developed by the Northwest Evaluation Association (NWEA). MAP is also an evidence based assessment with over 4.5 billion pairs of test items and responses collected over more than 12 years in a K-12 environment. This test will be given at the beginning, middle and end of each Algebra 1 and 2 class. Furthermore, we worked closely with the three high schools to determine which assessment test would be compatible and acceptable. All three high schools unanimously picked MAP. All Algebra 1 and 2 students will take a MAP Algebra pre-test. At the completion of this test each student will receive their Rasch Unit (RIT) score and a report that shows their current strengths and

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weaknesses within Algebra concepts. Furthermore the NWEA has developed a scale that enables you to estimate the students ACT score in math based on the RIT score. For example, a RIT score of 258 equates to an ACT score in math of 22.

Using the MAP pre-test report, PartnerCorps members will work closely with the Algebra teacher to design and implement specific interventions based on the student's individual needs. The Members will also set individual performance measures (percentage of increase) the student will need to make on the mid-term MAP test.

At the midpoint of the course the test will be given again to measure the students' progress toward meeting their performance measure. Also at that point, the report will be used to once again analyze each individual student's strengths/weaknesses of Algebra concepts. Members will again meet with the teacher to design and implement specific interventions based on these new results. The RIT score will also be used to determine if the student has reached benchmark on the ACT and determine the percentage of increase the student needs to make by the post-test. At the end of the course a MAP Algebra post-test will be given to every student to determine if the student has met benchmark.

- Your response to Performance Measure Clarification #3 did not specify the minimum level of improvement in academic achievement that will be required for each particular student in order for that student to be counted under this measure. Please provide this information in the Performance Measures narrative.

Target: 880 Students

Measured By: Measures of Academic Progress (MAP) Pre/Post Test Described Instrument: Of the 1686 students enrolled in Algebra 1 and 2 only 503 (29.85%) students are meeting benchmark as defined by ACT. Our goal is that 880 students will be at benchmark, a 75% increase, by the end of the year.

Note: Measures were set by taking total number of students currently enrolled in Algebra 1 and 2 that are meeting benchmark (503 students). Our goal is to increase the number of students at benchmark by 75% which would be 377 more students for a total of 880 meeting benchmark.

Continuation Changes

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N/A

Grant Characteristics