

MAR 24 2016

MARYLAND HIGHER EDUCATION COMMISSION
ACADEMIC PROGRAM PROPOSAL

PROPOSAL FOR:

- NEW INSTRUCTIONAL PROGRAM
- SUBSTANTIAL EXPANSION/MAJOR MODIFICATION
- COOPERATIVE DEGREE PROGRAM
- WITHIN EXISTING RESOURCES or REQUIRING NEW RESOURCES

(For each proposed program, attach a separate cover page. For example, two cover pages would accompany a proposal for a degree program and a certificate program.)

Johns Hopkins University

Institution Submitting Proposal

Fall 2016

Projected Implementation Date

Post-Baccalaureate Certificate

Award to be Offered

0899-02

Suggested HEGIS Code

School of Education

Department of Proposed Program

STEM Instructional Leader (PreK - 6)

Title of Proposed Program

13.1399

Suggested CIP Code

David Andrews, Dean

Name of Department Head

Philip Tang

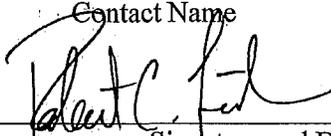
Contact Name

alo@jhu.edu

Contact E-Mail Address

(410) 516-6087

Contact Phone Number



Signature and Date

03/24/2016

President/Chief Executive Approval

N/A

Date

Date Endorsed/Approved by Governing Board

**The Johns Hopkins University
School of Education
Proposal for Substantial Modification to an Existing Program**

Post-Baccalaureate Certificate in K – 8 STEM Education Lead – Teacher

A. Centrality to institutional mission statement and planning priorities

1. Program Description and Alignment with Mission

The Johns Hopkins University School of Education (JHUSOE) proposes to substantially modify its existing and previously endorsed Post-Baccalaureate Certificate in K-8 STEM Education Lead-Teacher (HEGIS code 0899-02, CIP code 13.1399) to offer an online option and change the program name to Post-Baccalaureate Certificate in STEM Instructional Leader (PreK – 6).

Each course within the modified certificate will emphasize a problem-based, project-based approach, which allows for exploration, inquiry, problem solving, and critical thinking. The new approach will enhance teachers' understanding of STEM content, pedagogical content knowledge, and use of technology.

The mission of Johns Hopkins University is to educate its students and cultivate their capacity for life-long learning, to foster independent and original research, and to bring the benefits of discovery to the world. The mission of the School of Education is to support and advance the quality of education and human services for the continuous development of children, youth and adults. Both missions focus on developing the skills and knowledge necessary for contributing to a larger community and affirm that learning is an ongoing process in which students gain knowledge that lead to innovative discoveries. The proposed modifications are designed to align with the MSDE's approved Instructional Leader – STEM (PreK-6) licensure endorsement. The modifications are fully consistent with both missions.

2. Alignment with Institutional Strategic Goals

A timely implementation of an online PreK-6 STEM program supports the institutional mission of Johns Hopkins University and is consistent with the evolving vision for the School of Education. The school is dedicating resources to focus, strengthen, and apply JHUSOE's teaching, research, and development activities toward establishing innovative online programs designed to meet the needs of a uniquely diverse community of learner/practitioners. By offering the certificate in a distance education format, JHUSOE believes it could attract a much wider and potentially international audience. Accordingly, the JHUSOE's leadership fully supports the proposed distance education option and is prepared to devote the necessary resources to ensure its success.

B. Adequacy of curriculum design and delivery to related learning outcomes

1. Program Outline and Requirements

A full course listing with course titles and descriptions is provided in Appendix A. All of the courses, except for one elective, are new. To receive approval for graduation, students must successfully complete 18 credit hours and maintain a cumulative grade point average of at least 3.0 (on a 4.0 scale).

Students must take the following courses:

- Advanced Methods in the Elementary STEM Classroom (3 credits)
- Instructional Leadership and Professional Development in the Elementary School Setting (3 credits)
- Mathematical Foundations in the K-6 Classroom (3 credits)
- Physical Science in an Integrated Pre K-6 Classroom (3 credits)

Students will take one of the following courses:

- Earth and Space Science in an Integrated Pre K-6 Classroom (3 credits) or
- Life Science in an Integrated Pre-K-6 Classroom (3 credits)

Finally, students would take one of the following courses:

- Students seeking MSDE “Instructional Leader – STEM (PreK-6)” licensure endorsement who reside or teach in the state of Maryland will enroll in a clinical experience as required by MSDE (3 credits)
- Non-Maryland students, in consultation with their advisor, will take Technology Leadership for School Improvement (ED.893.634), Effective Leadership (ED.851.705), or an additional content course in either the PreK-6 Mathematics or STEM Instructional Leader certificates.

2. Educational Objectives and Student Learning Outcomes

The educational objectives of the PBC in STEM Instructional Leader (PreK – 6) is to enhance the STEM content knowledge and elementary STEM pedagogical content knowledge of elementary teachers.

Upon successful completion of the modified program, students will:

- Gain enhanced abilities to engage learners in STEM content.
- Learn modern theory and application of STEM content and pedagogy.
- Network with STEM educators and professionals.
- Develop the ability to approach the learning of new topics in STEM through a problem-based inquiry approach.
- Understand how scientific knowledge is constructed through learning about cutting-edge ideas in STEM, defending claims with evidence, and engaging in scientific argumentation.

- Develop age appropriate curriculum units and lesson plans to foster students' critical thinking and inquiry skills.
- Create and modify content specific and interdisciplinary STEM problems that can be used in classrooms.
- Evaluate and adapt local curricular materials to incorporate authentic problems related to STEM concepts and skills.

3. General Education Requirements

Not Applicable

4. Specialized Accreditation/Certification Requirements

The certificate coursework will align with the newly approved MSDE “Instructional Leader – STEM (PreK-6)” licensure endorsement.

5. Contractual Agreements with Other Institutions

Not Applicable

C. Critical and compelling regional or statewide need as identified in the State Plan

1. Demand and Need for Program

Nationally, the need for reform in the STEM fields has historically been trumpeted by many organizations. The National Council for the Teachers of Mathematics (1989; 2000), the American Association for the Advancement of Science (1989; 1993), and the National Research Council (1996) have all called for students to think like mathematicians, scientists and engineers.

Recently, the call has become more urgent. The National Science Board issued the report *Preparing the Next Generation of STEM Innovators* (2010), which describes better ways to identify and develop the next generation of “STEM innovators” in the United States. The report suggests that we must “cast a wide net” to seize on historically underrepresented talent including minority students and children from low-income families.

One of the many policy recommendations the board sets forth is the “support of rigorous, research-based STEM preparation for teachers, particularly general education teachers who have the most contact with STEM education innovators at young ages” (p. 3). Our proposed program is in direct alignment with this national policy recommendation.

2. Alignment with Maryland State Plan for Postsecondary Education

The proposed certificate to prepare highly trained teachers in STEM education directly supports the 2013 Maryland State Plan for Postsecondary Education. STEM education is highlighted under the Significant Issues section as one of the critical challenges and opportunities facing the state and is also referenced explicitly under Goals 2 (Access, Affordability, and Completion), 3 (Diversity), and 5 (Economic Growth and Vitality) in the plan.

D. Quantifiable and reliable evidence and documentation of market supply and demand in the region and State

1. Market Demand

In the United States, there is an ever-growing need for students well educated in the STEM fields. Sixty percent of companies surveyed by the *Business Roundtable and Change the Equation* reported that roughly 200,000 current U.S. job openings require basic STEM literacy, and 42% require advanced STEM knowledge (Business Roundtable and Change the Equation, 2012). These STEM fields offer middle- and high-skill jobs with significantly higher-than-average wages, increased employment opportunities and stability, and transferrable knowledge (NSF, 2014). However, what is concerning is our continued failure to attract more students to STEM education and careers. Female participation in engineering, computing, and advanced manufacturing has remained flat since 2001. Further, although Black and Hispanic percentages in the workforce population have steadily increased, their relative participation in these fields has declined for more than a decade. According to the Business-Higher Education Forum (BHEF) (2011), only 17 percent of high school seniors are both proficient in mathematics and interested in the STEM fields. Among Black students (who are underrepresented in STEM), only 6 percent are interested in STEM careers and college-ready in mathematics.

The National Education Summit held in 1999 highlighted the significance of preparing teachers to effectively implement state and national content standards in order to improve children's understanding of the core academic areas including science and mathematics (National Education Summit, 1999). Research suggests that teachers with well-developed content knowledge and pedagogical skills positively influence their instructional approach and opportunities for student learning (Darling-Hammond, 1999; Stotko, Beaty-O'Ferrall & Yerkes, 2005). Zeidler (2002) argues that outstanding teaching practices are dependent upon the interaction of subject matter knowledge and pedagogic knowledge. As mentioned in the previously, the need for greater participation and enhanced pedagogy in the STEM fields has been trumpeted by many organizations. This certificate will help answer this call by attracting in-service teachers who desire to be "STEM innovators." The new certificate will align with the call for "rigorous, research-based STEM preparation for teachers, particularly general education teachers who have the most contact with STEM education innovators at young ages." (National Science Board, 2010)

2. Educational and Training Needs in the Region

At the State level, STEM reform has also been in the headlines. In 2009, former Maryland Governor Martin O'Malley convened a STEM Task Force that recommended the need to enhance the STEM aptitudes of our school's elementary teachers. The report also pointed out the simple need for more STEM teachers, particularly at the elementary level.

At the state education level, in 2012 MSDE developed an elementary STEM certification. The suggested curriculum design is a problem-based learning approach. Such an approach has been found to be an effective means to improved student outcomes within each of the STEM disciplines (Schoen & Hirsch, 2003; Cichon & Ellis, 2003). This problem-based learning approach is very similar to the one SOE has already integrated into the current versions of its K-8 STEM and Mathematics Lead-Teacher certificates programs, and which the school plans to continue under the newly modified version of this program.

3. Prospective Graduates

We project enrolling at a minimum 20 students in Year 1 and 20 new students every year thereafter during the first five years of the program. Students can be expected to complete the program in 12-18 months. By Year 5, we expect to have graduated at least 60 students.

E. Reasonableness of program duplication

1. Similar Programs

MHEC has approved K-6 Lead Teacher STEM programs for Towson University and UMBC, which MSDE has subsequently endorsed for the state's new "Instructional Leader – STEM (PreK-6)" licensure endorsement, but neither program is offered online. Only the JHU program would have the potential for both a local, Maryland focus as well as a national/international reach.

2. Program Justification

The focus of the certificate program is to enrich teachers' subject content knowledge and pedagogical content knowledge in the STEM areas and to build upon their leadership potential by providing instruction relative to research-based professional development practices as well as through inquiry, dialogue, writing, and reflection. The program delivers course content for teachers who aspire to enhance their careers as STEM lead teachers.

F. Relevance to Historically Black Institutions (HBIs)

1. Potential impact on implementation or maintenance of high-demand programs at HBIs

Not Applicable

2. Potential impact on the uniqueness and institutional identities and missions of HBIs

Not Applicable

G. Evidence of compliance with the Principles of Good Practice

See Appendix B for the evidence that this program complies with the Principles of Good Practice noted above.

The Higher Education Opportunity Act (HEOA) enacted in 2008 requires that an academic institution that offers distance education opportunities to students: 1) has a process established to verify that the student who registers is the same student who participates in and completes the offering and receives academic credit for it, 2) has a process established to verify that student privacy rights are protected, and 3) has a process established that notifies the student about any additional costs or charges that are associated with verification of student identity. In this graduate program, the following actions have been taken to satisfy these requirements: 1) students may only enter the academic website for the online courses they take by providing their unique student ID and password they receive when they are admitted to the programs, 2) all FERPA privacy rights are preserved by limiting access very specifically in the University student information system to only those permitted by law to have access to restricted student information, and 3) there are no additional costs assessed to the student for the measures we use to verify student identity.

H. Adequacy of faculty resources

The following two full-time JHUSOE faculty, both of whom already teach and advise in the current version of the certificate, will continue to serve in this capacity in the newly modified certificate program:

Dr. Carolyn Parker (Assistant Professor and program director), Ph.D. in Curriculum and Instruction, University of Maryland, College Park, MD

Dr. Stephen Pape (Professor), Ph.D. in Educational Psychology—Human Learning and Instruction, with a subspecialty in Research on Teaching and Learning Mathematics, City University of New York, Graduate School and University Center, NY

In addition, qualified adjunct faculty will support the program, many of whom have already taught in the current version of the certificate. At the time of writing, it has yet to be determined which specific courses each individual faculty member will teach. See Appendix C for a listing of the current adjunct faculty who will teach in the modified program.

I. Adequacy of library resources

Students have full and complete access to the Milton S. Eisenhower Library on the Homewood campus, which is ranked as one of the nation's foremost facilities for research and scholarship. Its collection of more than three million bound volumes, several million microfilms, and more than 13,000 journal subscriptions has been assembled to support the academic efforts of the University. The interlibrary loan department makes the research collection of the nation available to faculty and students. The library also provides easy access to a wide selection of electronic information resources, including the library's online catalog, and numerous electronic abstracting and indexing tools. Many of the databases are accessible remotely. Librarians help students electronically and the library maintains an extensive web site to take visitors through all of its services and materials. To this are added more than 10,000 audiovisual titles available for on-site consultation.

J. Adequacy of physical facilities, infrastructure and instructional equipment

The proposed online PreK-6 STEM certificate will be delivered wholly online, and therefore it does not impact SOE's physical facilities and infrastructure. In terms of technology infrastructure and support, the proposed online certificate will be delivered through Blackboard. As part of the program's development, the school's technical support team and business office have determined that SOE possesses the necessary technology infrastructure and resources in place to support successful delivery of this online program option.

K. Adequacy of financial resources with documentation

See Appendix D for detailed financial information.

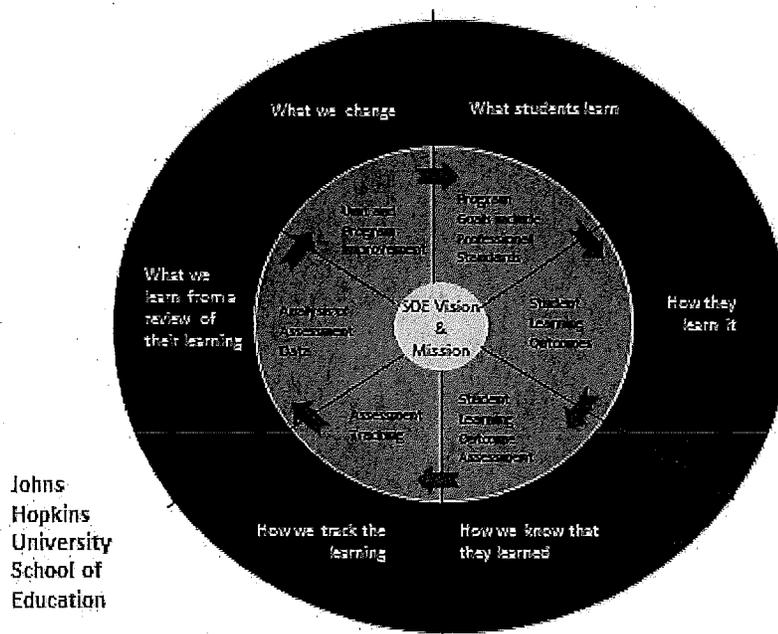
L. Adequacy of provisions for evaluation of program

The PreK-6 STEM certificate program will be overseen by a program director (Dr. Carolyn Parker), who will report to SOE's Vice Dean for Academic Affairs. These two oversight positions will ensure that the program is meeting its stated goals and objectives, and that it is of the caliber expected of a Research I university. On a day-to-day basis, the program will be managed by the program director, who will be responsible for staffing courses, managing and evaluating course offerings, and so on.

In addition, a design team, comprising SOE faculty and personnel from SOE's Office of Online Teaching and Learning with expertise in online instructional design and support, will be responsible for developing and delivering the online courses.

The entire evaluation process will be guided by the iterative assessment cycle laid out in the School of Education's Comprehensive Assessment Plan.

Assessment Cycle



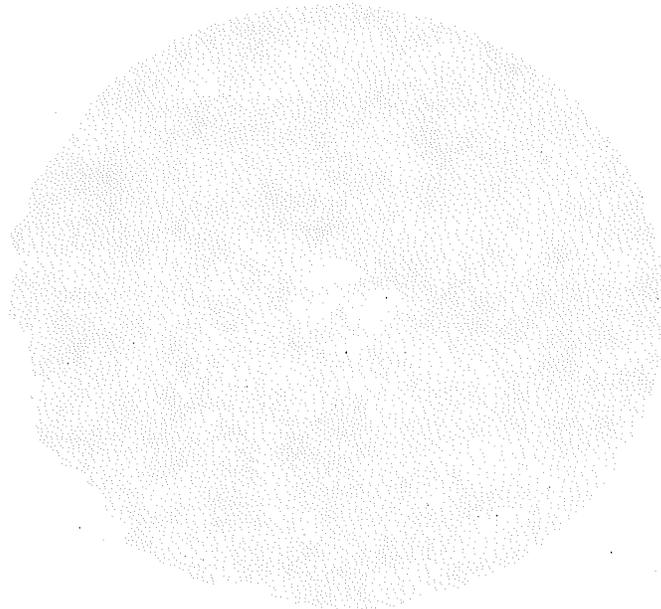
M. Consistency with the State's minority student achievement goals

The Johns Hopkins University follows all stipulations of Title VI, Title IX, and Section 504. Accordingly, race is not considered in the administration of the school's educational programs. Nonetheless, in accordance with Johns Hopkins University's stated commitment to diversity, we believe educators should use aggressive and innovative recruitment and support processes to increase and sustain diversity.

When students commit to the program, whatever their background, they must see clear structures that promote program success and completion. Once enrolled in the program, online support from faculty and/or staff to discuss issues or concerns (both academic and non-academic) will be available to all students on an individual basis.

N. Relationship to low productivity programs identified by the Commission

Not Applicable



Appendix A

Course Descriptions

Advanced Methods in the Elementary STEM Classroom (3 credits)

The use of current techniques and materials in teaching in an integrated STEM approach of pedagogy and content in grades K-6. The course will include skills essential to the STEM learning environment.

Instructional STEM Leadership and Professional Development in the Elementary School Setting (3 credits)

An examination of approaches to STEM instructional leadership in elementary schools, with special attention to problems of curriculum development, supervision and evaluation of teaching, assessment of student learning, and the design and implementation of school improvement programs, including theories and practices needed to guide K-6 STEM teachers to improve their teaching practices. Strategies for developing a constructive, collaborative approach to helping STEM teachers improve will be emphasized.

Mathematical Foundations in the K-6 Classroom (3 credits)

The goal of this course is to examine the following topics: patterns, number, and operations; algorithms involving whole numbers; introductory algebra; introductory geometry, measurement; statistics; and probability as applied to the integrated K-6 classroom. Connections of the listed topics to an integrated approach to curriculum and instruction will be emphasized.

Physical Science in an Integrated Pre K-6 Classroom (3 credits)

The goal of this course is to provide K-6 teachers a rich understanding of foundational physical science concepts and their applications in an integrated science, technology, engineering, and mathematical world. Topics will include: structure, properties, and interactions of matter, physical and chemical properties of materials mechanics, force and motion, gravity, energy transformations, energy sources, electricity, magnetism, light, sound, and wave interactions. Problem-based inquiries will be organized to engage the participants in planning investigations; gathering and analyzing data; offering plausible explanations; and developing a deeper knowledge base in the physical sciences. The engineering design process will be integrated throughout the course.

Earth and Space Science in an Integrated Pre K-6 Classroom (3 credits)

The goal of this course is to provide K-6 teachers a rich understanding of Earth and space science content and pedagogy. Topics will include: chemical and physical interactions of the environment, Earth, and the universe; weathering and erosion; processes and events causing changes in Earth's surface; Earth history; plate tectonics; and astronomy. Problem-based inquiries will be organized to engage the participants in planning investigations; gathering and analyzing data; offering plausible explanations; and developing a deeper knowledge base of Earth and space science. The engineering design process will be integrated throughout the course.

Life Science in an Integrated Pre-K-6 Classroom (3 credits)

The goal of this course is to provide K-6 teachers a rich understanding of life science content and pedagogy. Topics will include: living organisms and their interactions; diversity of life; genetics; evolution; flow of matter and energy; and ecology. The applications and impact of technology on human life will be an important feature of the course. Problem-based inquiries will be organized to engage the participants in planning investigations; gathering and analyzing data; offering plausible explanations; and developing a deeper knowledge base of Earth and space science. The engineering design process will be integrated throughout the course.

To complete the clinical experience as required by MSDE, students employed in the state of Maryland will enroll in a specially designated section of:

ED.851.810 Internship in Administration and Supervision (3 credits)

Students participate in a supervised leadership focused practicum experience in an educational setting. Sections of this course will focus on the role of a mathematics specialist/instructional leader.

Students not from Maryland could enroll in one of the following courses:

ED.851.705 Effective Leadership (3 credits)

Students review the principles and techniques required of principals, assistant principals, and teacher leaders. The course emphasizes diagnosis of the school climate, principles of distributed leadership, motivation of faculty teams, and the dynamics of working in and with groups to accomplish school improvement goals. Emphasis is placed on the leader's role in creating a collaborative vision/mission for a school and in establishing meaningful working relationships with the larger community.

ED.893.634 Technology Leadership for School Improvement (3 credits)

Education leaders need to understand the use of technology for teaching, learning, and managing their school environment. These skills include school wide technology planning and leadership that incorporate instructional design, curriculum integration with standards, logistics of technology implementation, professional development, and evaluation. Students will develop an understanding of how to create and support technological change through a systems approach. Topics include sources of resistance to change, tools for planning, decision making and change, creating and supporting a culture for learning and change, and managing and institutionalizing change systems.

Appendix B

Evidence of Compliance with the Principles of Good Practice (as outlined in COMAR 13B02.03.22C)

(a) Curriculum and Instruction

- (i) **A distance education program shall be established and overseen by qualified faculty.**

This is already a well-established site-based program; many of the faculty teaching in the on-site program also serve as online instructors. Any new instructor recruited to teach online would be required to meet the same qualifications as those teaching in the traditional site-based program.

- (ii) **A program's curriculum shall be coherent, cohesive, and comparable in academic rigor to programs offered in traditional instructional formats.**

Most of the courses in the online program are offered in the traditional, site-based program. Prior to a course being converted for online delivery, the course is usually taught at least twice in class. A formal online course development process is used to support the course conversion from in-class to online. The online course development process incorporates the Quality Matters™ research-based set of eight standards for quality online course design to ensure the academic rigor of the online course is comparable or better to the traditionally offered course.

- (iii) **A program shall result in learning outcomes appropriate to the rigor and breadth of the program.**

The program learning outcomes for the distance education program are identical to the traditional on-site program (please see section B.2).

- (iv) **A program shall provide for appropriate real-time or delayed interaction between faculty and students.**

The proposed PreK-6 STEM certificate will be delivered using Blackboard, which is a platform that allows for synchronous and asynchronous instruction and interaction between faculty and students. Instruction will primarily be delivered through media presentations, readings, group activities, and discussions. In addition, JHUSOE faculty will also be available for instruction, communication and mentoring via email, Adobe Connect, VoIP, IM, and the telephone.

- (v) Faculty members in appropriate disciplines in collaboration with other institutional personnel shall participate in the design of courses offered through a distance education program.**

Full-time faculty who are disciplinary experts, primarily Drs. Parker and Pape, will work with a design team from JHUSOE's Office of Online Teaching and Learning, who have expertise in distance education, to design the course offerings.

(b) Role and Mission

- (i) A distance education program shall be consistent with the institution's mission.**

Refer to Section A.1 in the main body of the proposal.

- (ii) Review and approval processes shall ensure the appropriateness of the technology being used to meet a program's objectives.**

The design team will ensure that the program is delivered using technology that best enhances the content delivery and student interaction with each other, with faculty, and with the learning management system (Blackboard). The technology chosen is designed to support the learning outcomes for each specific course. Once the program launches, the faculty program director and design team will continually monitor the technology used, and make adjustments as necessary, to ensure that the program meets its objectives.

(c) Faculty Support

- (i) An institution shall provide for training for faculty who teach with the use of technology in a distance education format, including training in the learning management system and the pedagogy of distance education.**

The School of Education requires instructors to undertake training in how to teach an online course prior to teaching an online course. JHUSOE offers a three-week, facilitated, online training course (How to Teach Online) for faculty to learn how to use the technology involved with the learning management system. The course, which is customized as needed for specific programs, also trains faculty on how to teach online and how to effectively manage the course—for example, how to oversee an online discussion. In addition, JHUSOE also develops and offers (on an as needed basis) other self-paced training modules for faculty on specific technologies and processes. The School of Education has successfully delivered numerous online courses and programs in the past five years as JHUSOE's distance education footprint has expanded. Many instructors (both full-time and adjunct faculty) have prior experience in teaching online courses. A website has been created that makes available to all faculty numerous resources related to online instruction, including policies, forms, tutorials, library resources, and technology resources.

(ii) Principles of best practice for teaching in a distance education format shall be developed and maintained by the faculty.

JHUSOE's Office of Online Teaching and Learning has developed its own best practices for teaching online. These practices are drawn from many sources, including research by our own faculty. The School of Education always endeavors to ensure that the faculty is introduced to these best practices during training and that they are followed when designing and managing courses. Courses are evaluated every semester to ensure that they continue to align with distance education best practices.

(iii) An institution shall provide faculty support services specifically related to teaching through a distance education format.

As outlined above, SOE's Office of Online Teaching and Learning provides support and training to faculty in both the design and delivery phases of distance education programs/courses. As well as providing mentoring and technical support in-house, SOE has also contracted with an outside vendor to provide additional 24/7 technical support to faculty (and students) when SOE support personnel are unavailable.

(d) An institution shall ensure that appropriate learning resources are available to students including appropriate and adequate library services and resources.

The students will have online access to the Milton S. Eisenhower Library on the Homewood campus, which is ranked as one of the nation's foremost facilities for research and scholarship. Its collection of more than three million bound volumes, several million microfilms, and more than 13,000 journal subscriptions has been assembled to support the academic efforts of the University. The interlibrary loan department makes the research collection of the nation available to faculty and students. The library also provides easy access to a wide selection of electronic information resources, including the library's online catalog, and numerous electronic abstracting and indexing tools. Many of the databases are accessible remotely. Librarians help students electronically and the library maintains an extensive web site to take visitors through all of its services and materials.

(e) Students and Student Services

- (i) A distance education program shall provide students with clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interaction, assumptions about technology competence and skills, technical equipment requirements, learning management system, availability of academic support services and financial aid resources, and costs and payment policies.**

The School of Education offers self-paced online training and orientation modules to all students in distance education programs. The orientation module, which is mandatory for students to take and is tracked for successful completion, can be customized (as needed) for specific programs. All online orientation modules include a program overview detailing the curriculum and program requirements, orientation on the use of all technologies involved (such Blackboard and ISIS, JHU's student information system), and information about the entire range of student services available to students, including registration and financial aid. In addition, SOE offers online training modules for students on conducting library searches, formatting papers and references, and understanding and avoiding plagiarism, among other topics.

Upon admission into the program, students are assigned a full-time faculty advisor to meet with and create a program plan that outlines their curriculum and course degree requirements.

- (ii) Enrolled students shall have reasonable and adequate access to the range of student services to support their distance education activities.**

JHUSOE online students have access to the following academic support services:

- **Academic Advising.** Students are assigned an advisor when accepted. Students work individually with the advisor to develop a course of study that meets the requirements of the program and the career goals of the student. The advisor is expected to contact all advisees each semester to check on progress and answer questions. Courses that deviate from the program plan and have not been approved by an advisor may not count toward degree requirements.
- **Library Services.** Students have online access to the Milton S. Eisenhower Library on the Homewood campus, ranked as one of the nation's foremost facilities for research and scholarship. The interlibrary loan department allows students access to resources at any other university in the nation. The library also provides easy access to a wide selection of electronic information resources, including the library's online catalog and numerous electronic abstracting and indexing tools. Many of the databases are accessible remotely. Librarians are available to assist students remotely and the library maintains an extensive web site to take visitors through all its services and materials.

- **Services for Students with Disabilities.** The Johns Hopkins University is committed to making all academic programs, support services, and facilities accessible to qualified individuals. Students with disabilities who require reasonable accommodations can contact the JHUSOE Disability Services Administrator.
- **Johns Hopkins Student Assistance Program.** The Johns Hopkins Student Assistance Program (JHSAP) is a professional counseling service that can assist students with managing problems of daily living. JHSAP focuses on problem solving through short-term counseling. Accessing the service is a simple matter of a phone call to arrange an appointment with a counselor. Online students may call a phone number for consultation and will be directed to the appropriate resource or office. JHSAP services are completely confidential. The program operates under state and federal confidentiality legislation and is HIPAA compliant.
- **Transcript Access.** Official transcripts will be mailed upon written request of the student at no charge.
- **Student ID JCard.** The JCard serves as the student's University identification card. This card is mailed to the home address of every registered student. The JCard acts as the university library card, which enables students to check out books from the Homewood Eisenhower Library or at any of the campus center libraries, and provides access to many computer laboratories.

(iii) Accepted students shall have the background, knowledge, and technical skills needed to undertake a distance education program.

Through a rigorous application process, the School of Education will ensure that only candidates who have the appropriate background, knowledge, and technical skills to undertake a distance education program will be admitted into the PreK-6 STEM certificate program. The program will be targeted at classroom educators. In order to be admitted to the programs, candidates will be required to demonstrate (among other things) strong academic credentials and provide two letters of reference, along with a personal statement that indicates both their commitment to the teaching and their understanding of the program's requirements.

Once enrolled in the program, students will undertake a mandatory program orientation to familiarize them with the requirements of the program. In addition, students have the option to take further online training modules to help them navigate through the program.

- (iv) Advertising, recruiting, and admissions materials shall clearly and accurately represent the program and the services available.**

The School of Education regularly reviews its advertising, recruiting and admissions materials to ensure they clearly and accurately represent the program and services available.

(f) Commitment to Support

- (i) Policies for faculty evaluation shall include appropriate consideration of teaching and scholarly activities related to distance education programs.**

JHUSOE evaluates faculty regularly as part of their annual performance review. Faculty who are directly involved in distance education programs are evaluated on the basis of both their effectiveness in teaching online courses and their scholarship in this field.

- (ii) An institution shall demonstrate a commitment to ongoing support, both financial and technical, and to continuation of a program for a period sufficient to enable students to complete a degree or certificate.**

Please see sections J and K of the proposal.

(g) Evaluation and Assessment

- (i) An institution shall evaluate a distance education program's educational effectiveness, including assessments of student learning outcomes, student retention, student and faculty satisfaction, and cost-effectiveness.**

Please see Section L of the main body of the proposal.

- (ii) An institution shall demonstrate an evidence-based approach to best online teaching practices.**

The School of Education has long embraced an evidence-based approach to online teaching. JHUSOE uses existing research from the field, as well as its own internal research, to guide the design and implementation of our distance education courses and programs. For example, JHUSOE conducts semester-end summative course evaluations, the results of which are then analyzed to determine if changes to the course content or course delivery mechanisms are necessary.

- (iii) An institution shall provide for assessment and documentation of student achievement of learning outcomes in a distance education program.**

As with all JHUSOE programs, student learning outcomes in the proposed online PreK-6 STEM program will be assessed according to the individual rubrics that are developed for specific courses and/or assessments. These data on student performance

are stored in Tk20, which is JHUSOE's program assessment tool. Tk20 enables the School of Education to design assessments, compare them against specified learning outcomes, and generate data reports for program analysis and improvement purposes. In accordance with JHUSOE standard practice, the program director, with input from JHUSOE's instructional design team, will analyze assessment data every semester, and, based on these data, modify (as necessary) any rubrics, assessments, and so on, to ensure that student learning outcomes are being appropriately assessed in the program.

Appendix C

Faculty

Appendix C provides a list of the adjunct faculty who has taught in the certificate in the last five years along with their terminal degree.

Nancy Abott	Master of Arts in Teaching
Dan Ferendez	Master of Science
Gretchen Gray	Master of Arts in Teaching
Cynthia Greenberg	Master in Education
Rob Hewes	Master of Science
Eric Hildebrand	Ph.D.
Francine Johnson	Ph.D.
Jason Labonte	Ph.D.
Stephanie Larson	Ph.D.
Kathy Mrozeck	Master of Arts in Teaching
Vince O'Neill	Ed.D.
Minjung Ryu	Ph.D.
Erica Smith	Ph.D.
Yasmeen Thomas	Master of Science

Appendix D

Finance Information

TABLE 1: RESOURCES:					
Resource Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated Funds	N/A	N/A	N/A	N/A	N/A
2. Tuition/Fee Revenue (c + g below)	\$189,600	\$284,400	\$284,400	\$284,400	\$284,400
a. Number of F/T Students	N/A	N/A	N/A	N/A	N/A
b. Annual Tuition/Fee Rate	N/A	N/A	N/A	N/A	N/A
c. Total F/T Revenue (a x b)	N/A	N/A	N/A	N/A	N/A
d. Number of P/T Students	20	40	40	40	40
e. Credit Hour Rate	\$790	\$790	\$790	\$790	\$790
f. # of Credits Offered Per Year	12	18	18	18	18
g. Total P/T Revenue (d x e x f)	\$189,600	\$284,400	\$284,400	\$284,400	\$284,400
3. Grants, Contracts & Other External	N/A	N/A	N/A	N/A	N/A
4. Other Sources	N/A	N/A	N/A	N/A	N/A
TOTAL (Add 1 – 4)	\$189,600	\$284,400	\$284,400	\$284,400	\$284,400

Resources Narrative:

1. Reallocated Funds: No funds will be reallocated from existing campus resources.
2. Tuition and Fee Revenue: Tuition and Fee Revenue: We project enrolling a new cohort of at least every year during the first five years of the program. Currently, SOE's standard tuition rate for online courses \$790 per credit—we do not anticipate this tuition rate increasing during the five-year budget period.
3. Grants and Contracts: It is unknown at this time when any grants, contracts, or external funding sources will become available during this five year period.
4. Other Sources: No additional funds have been designated for this program.

TABLE 2: EXPENDITURES:					
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b + c below)	\$40,289	\$50,272	\$50,881	\$51,505	\$52,145
a. # Sections offered	4	6	6	6	6
b. Total Salary	\$33,730	\$42,173	\$42,628	\$43,093	\$43,571
c. Total Benefits	\$6,559	\$8,099	\$8,253	\$8,412	\$8,574
2. Admin. Staff (b + c below)	-	-	-	-	-
a. # FTE	-	-	-	-	-
b. Total Salary	-	-	-	-	-
c. Total Benefits	-	-	-	-	-
3. Support Staff (b+c below)	\$2,345	\$2,404	\$2,464	\$2,525	\$2,588
a. # FTE	.05	.05	.05	.05	.05
b. Total Salary	\$1,750	\$1,794	\$1,839	\$1,885	\$1,932
c. Total Benefits	\$595	\$610	\$625	\$641	\$657
4. Equipment	-	-	-	-	-
5. Library	-	-	-	-	-
6. New or Renovated Space	-	-	-	-	-
7. Other Expenses	\$110,400	\$110,400	\$110,400	\$110,400	\$110,400
TOTAL (Add 1 – 7)	\$153,034	\$163,076	\$163,745	\$164,430	\$165,133

Expenditures Narrative:

1. Faculty: At the current projected size of the program, no new faculty members have been requested. However, because existing faculty time is being allocated to support this program, some of the current workload may need to be reassigned to other full-time or adjunct faculty within the School of Education or require that some courses be taught by existing full-time faculty on an overload basis.
2. Administrative: N/A
3. Support Staff: A portion of current support staff time will be allocated but no new support staff will be needed under current conditions.
4. Equipment: No equipment expenditures beyond those currently provided to the School of Education have been requested at this time.
5. Library: No library expenditures beyond those currently provided to the School of Education have been requested at this time.
6. New or Renovated Space: Since this a fully online program that does not require any physical infrastructure to deliver it, no special facilities are being requested.
7. Other Expenses: We are allocating funds for course development.