

**DATE:** January 28, 2016

**SUBJECT:** 2016 Improving Teacher Quality Grant Awards

**ACTION RECOMMENDED:** Information

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**BACKGROUND INFORMATION:** Operating as Title II of the No Child Left Behind Act, the Improving Teacher Quality Grant Program is a federally funded program which provides grants to public and private higher education institutions and non-profit organizations. Administered in Tennessee by the Tennessee Higher Education Commission, these grants are designed to conduct professional development for in-service K-12 teachers.

In accordance with Section 2132 (a) of the No Child Left Behind Act, the Tennessee Higher Education Commission worked jointly with the Tennessee Department of Education to identify priorities that will have the greatest impact on Tennessee school districts and student achievement. As a result of this collaboration, STEM subjects for grades 9-12 were identified as the areas of focus for 2016.

Institutions prepared proposals to demonstrate their ability to provide a summer workshop, along with sustained activities throughout the school year, to high school teachers. Proposals were allowed a maximum funding level of \$75,000. Projects are funded from January 1, 2016 to December 31, 2016.

An Advisory Committee consisting of both K-12 and higher education experts was constituted to review grant proposals and make funding recommendations to the Commission. This year's Advisory Committee is listed on Attachment A. Attachment B presents the projects recommended by the Advisory Committee and approved by the THEC Interim Executive Director. A total of 30 proposals were submitted and 13 projects recommended for funding at \$933,000.

The grant review process is described on Attachment C to this agenda item. All grant proposals are available for review at the Commission office.

**Attachment A**  
**2016 Improving Teacher Quality**  
**Advisory Committee**

Diane Berty  
*Tennessee Independent Colleges and Universities*  
*Association*

Karen Brinkley  
*University of Tennessee*

Kate Derrick  
*Tennessee Higher Education Commission*

Nancy Dietrich  
*University of Tennessee*

Matt Freeman  
*Tennessee Higher Education Commission*

Gloria Gammell  
*University of Tennessee*

Briana Johnson  
*Tennessee Department of Labor*

Deborah Knoll  
*Tennessee Department of Education*

Heidi Leming  
*Tennessee Board of Regents*

Patrick L. Meldrim  
*Tennessee Independent Colleges and Universities*  
*Association*

Amy Owen  
*Tennessee Department of Education*

Gregory A. Sedrick  
*Tennessee Board of Regents*

Deanna Morris-Stacey  
*Tennessee Board of Regents*

Latonya Todd  
*Tennessee Higher Education Commission*

Kate Watts  
*Tennessee Higher Education Commission*

Brad Windley  
*Citizen Representative*

**Attachment B**  
**2016 Improving Teacher Quality**  
**Recommended Projects**

**East Tennessee State University**

*"Integrating High School Chemistry and Literacy for STEM Prosperity"*

Dr. Chih-Che Tai

East Tennessee State University will use ITQ funds to provide research-based professional development to 20 high school STEM teachers to increase their content knowledge and advance their pedagogical skills in Tennessee's Science, English Language Arts and Career Technical Education standards.

**East Tennessee State University**

*"Reaching for Excellence in High School Biology and Literacy"*

Dr. Karin Keith

The project will increase teacher content knowledge for 20 high school Biology teachers. Teachers will participate in professional development to improve their students' academic performance and advance their own pedagogical skills.

**Lee University**

*"Career and Technical Content in High School Mathematics (CATCH Math)"*

Dr. Caroline Maher-Boulis

Lee University will use ITQ funds to raise awareness among 24 high school mathematics teacher. The CATCH Math project will show teachers how to help students develop workplace and technical skills sought after by industry leaders. This will be done through creating real world problems that encapsulate the targeted mathematical content, the effective use of manipulatives and hands-on scientific experiments and developing workplace and technical skills.

**Lee University**

*"Computations in Scientific Inquiry (CSI)"*

Dr. Lori West

The project seeks to increase teacher knowledge and competency in STEM instruction for 24 high school mathematics and science teachers. This project will promote integrative learning using a forensic science theme and provide teachers with the opportunity and resources to collaborate with one another across disciplines.

## **Milligan College**

*"Hands-on CaMP: Integrating Chemistry, Math, and Physics to Support Real World STEM Applications"*

Dr. Lyn C. Howell

Milligan College will use ITQ funds to provide 30 teachers with hands-on opportunities to practice and refine their math, chemistry, and physics knowledge while equipping them with effective strategies for instruction and collaboration and exposing them to workforce needs.

## **Middle Tennessee State University**

*"POGIL to Success in Chemistry"*

Dr. Tom Cheatham

This project seeks to serve 25 teachers using the Process Oriented Guided Inquiry Learning (POGIL) model. The POGIL model has been used effectively to support that students learn best and experience higher interest when doing science like scientists. Teacher participants will strategically be selected to play the role of students working in small teams to solve problems related to chemistry.

## **Tennessee Technological University**

*"Coding Connections at the Interface of Algebra I and Physical World Concepts"*

Dr. Leslie Suters

Tennessee Technological University will use ITQ funds to provide professional development to 24 high school teachers focusing on computer programming and robotics with specific connections to Algebra I and Physical World concepts.

## **Tennessee Technological University**

*"Experiencing STEM: Demystifying the Practical Classroom Application of Immersive & Augmented Technologies "*

Dr. David Gallop

This project will focus on training 18 high school teachers to use new technology in the classroom and thereby enrich course content. Teachers will build course content and pedagogical knowledge that will help them engage students in hands-on experiences that will lead to the creation of virtual educational materials.

**University of Memphis**

*"Improving Mobile Technology Integration in High School Math and Science Teachers' Instruction and Assessment Practices"*

Dr. Deborah Watlington

University of Memphis seeks to increase 24 high school STEM teachers content knowledge, improving instructional strategies and assessment practices through the integration of mobile technology.

**University of Tennessee, Chattanooga**

*"Leveraging Remote Engineering Laboratories to Inspire Learning & Reinforce 9-12 STEM Curriculum Standards in the Physical, Chemical & Biological Sciences"*

Dr. Bryan J. Ennis

The ITQ project at University of Tennessee, Chattanooga will increase 24 teachers knowledge in their respective fields of chemistry, biology, and physics/technology, as well as underlying mathematics content, through utilization of professional engineering remote laboratory activities.

**University of Tennessee, Chattanooga**

*"Equations, Functions, and Modeling with Real-world Problems in Algebra I"*

Dr. Deborah A. McAllister

The project will focus on improving mathematics content and pedagogy for 32 Algebra I teachers including regular teachers and exceptional teachers, as they implement the Tennessee Math Standards. The program will emphasize the importance of equations, functions, and modeling for solving contextual problems.

**University of Tennessee, Chattanooga**

*"Real World Applications for the Mathematics Classroom"*

Dr. Francesco Barioli

University of Tennessee, Chattanooga will use ITQ funds to provide 30 in service teachers with the methodology to enhance the teaching of algebra/statistics via real world applications. These applications will range from science to business and include various algebra topics such as linear equations and exponential equations.

**University of Tennessee, Knoxville**

*"Connecting Math and STEM through Modeling"*

Dr. Lynn Hodge

The ITQ project at University of Tennessee, Knoxville will seek to enhance and improve 24 teachers' instructional practices, math content understanding, and implementation of STEM activities and projects at the high school level in order to substantially impact student learning and motivation.

**Attachment C**  
**2016 Improving Teacher Quality**  
**Proposal Review Process**

On August 10, 2015, a memo from Dr. Russ Deaton and the Request for Proposals (RFP) for the Improving Teacher Quality Grants was distributed to college and university chancellors, presidents, deans, and faculty.

The RFP included the background of ITQ grants, federal requirements, funding priorities as determined by THEC, a description of eligible partners (including a list of high-need school districts), competition guidelines, grant timeline, evaluation rubric, and all appropriate forms to be completed for proposals. A Notice of Intent to Submit was due by August 24, 2015 and completed grant proposals were due to THEC on September 21, 2015 by 4:30 p.m. CST.

THEC staff distributed the grant proposals to the Advisory Committee for review prior to the committee meeting on October 14, 2015. The committee was divided into teams to individually evaluate proposals. The teams met separately in small groups to discuss their assigned grants and score the grants according to the evaluation rubric.

Proposals with the top scores were compiled into a master list. The entire committee could pose questions about the grant proposal, make recommendations or amendments, and discuss the level of funding the proposal should receive. The Advisory Committee then funded the proposals based on the scored average, with necessary geographical requirements taken into account.