### Calvin College

**140290-025**  
**$220,000**

**Partners in Learning and Teaching Mathematics**

This partnership in mathematics professional development addresses the needs of teachers and students (grades K-6) at William C. Abney Academy, a high-need LEA. It is a collaboration involving Calvin College’s Departments of Mathematics/Statistics and Education, staff at William C. Abney Academy, plus teachers from Grand Rapids Public Schools (Congress and Stocking Elementary Schools), and Living Stones Academy, a non-public school. Forty teachers and administrators will be offered over 100 hours of professional development.

The long-term goal of the professional development is to nurture teachers so that they can more effectively provide high-quality mathematics instruction that will result in improved student learning. To achieve this goal, the Project will concentrate on the following objectives that were identified by a survey and teacher/administrator discussions:

1. Teachers will grow in content knowledge (especially Numbers in Base-Ten, Numbers and Operations-Fractions, Operations and Algebraic Thinking and Measurement).
2. Teacher pedagogical practice will improve (especially inquiry-based lessons, classroom discussion, and instructional strategies).
3. Teachers will understand the MI Mathematics Common Core Content and Practice Standards.
4. Teachers will form a community of learners both within and beyond their buildings.
5. Teachers will gain confidence in working with a diverse group of students.

### Central Michigan University

**140290-007**  
**$227,644**

**Pathway to College and Career Readiness: A Research-Based Professional Development Project in Literacy**

*Pathway to College and Career Readiness* provides needs-based professional development for the 36 teachers of 3<sup>rd</sup> to 8<sup>th</sup> grade English Language Arts and four principals from Farwell Area Schools and Harrison Community Schools during the 2014-2015 school year. This project will provide more than ninety hours of professional development, including weekly on-site or online coaching and classroom observations, to prepare the teachers to implement the English Language Arts Common Core State Standards (CCSS).

The goal of this project is to provide research-based, job-embedded, and technology-enhanced sustainable professional development to attain substantial and meaningful improvement in literacy achievement for all participating schools’ students.
By the end of the project period:

1. Teachers will achieve a score of at least 95% on a Content Knowledge for Teaching assessment, which is aligned with the English Language Arts CCSS.

2. Teachers will be able to utilize technological tools to analyze, plan, teach, observe, and evaluate each other’s instructional activities that are aligned with the CCSS.

3. At least 15% more students of the participating teachers will demonstrate readiness for college and career in reading and writing literature and informational text, as measured by the state standardized assessment and grade level common assessments developed during the Project.

Central Michigan University        140290-015  $219,848
The Macomb Area Geography and History Project

The Macomb Area Geography and History Project is a proposal for a Title II Part A (3) Improving Teacher Quality Grant in Category 1: Partnership for Professional Learning Opportunities with the target content area of social studies.

The Project will provide ninety hours of high-quality professional development programs for 30-36 middle school and high school social studies teachers and the special education teachers working along with them.

The goal of the Macomb Area Geography and History Project is to help teachers implement Michigan grade level and high school content expectations for world geography and history.

The Project will:

1. provide 90 hours of training for 30-36 sixth grade, seventh grade, and high school geography and history teachers and special education teachers from Macomb Area public and nonpublic schools between summer 2014 and fall 2015;

2. integrate principles from contemporary brain research and Universal Design for Learning into geography-based professional outreach in a systematic manner; and

3. collect individual and systematic data on teachers and students involved in the project including pre- and post-test data on student and teacher learning, and observations of teachers focused on use of project materials and strategies.

Grand Valley State University      140290-005  $249,950
Science Teacher Education and Development – Part 3 (STEAD–3)

GVSU’s College of Education and Integrated Science Department have developed a strong professional development partnership in the area of middle school science with the Muskegon Public Schools, the Wyoming Public Schools, and The Potters House private school in West Michigan. STEAD-3 builds on our two prior Title II A(3) grants, entitled Science Teacher Education and Development (STEAD) and STEAD-2, and provides an additional 90 hours of GLCE-based professional development to (32) 4th-8th grade science teachers in these schools. Eighteen of the teachers are returning 5th-7th grade science teachers from STEAD and STEAD-2; the other 14 are new participants, most of whom teach 4th grade science. This Category 2 Sustaining Project will target energy-related GLCEs, along with pedagogical strategies that research has shown to be critical in teaching underrepresented students.
The additional high-need GLCE areas identified for further PD in STEAD-3 are 1) Interdependence/Energy Flow in Ecosystems and Earth Systems and 2) Forms of Energy, Energy Transformations, and Energy Conservation. The targeted GLCE science process standards are 1) Asking questions 2) Proof and justification 3) Developing solutions and 4) Interpreting information. Other pedagogical strategies include: Universal Designs for Learning (UDL), quality questioning, inquiry-based science methods, and assessment development.

<table>
<thead>
<tr>
<th>Lawrence Technological University</th>
<th>140290-018</th>
<th>$250,000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Super Science for Special Teachers – Continue 2 Change the Equation</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Super Science for Special Teachers – Continue 2 Change the Equation (S3T-C2CtE) is a grant partnership between Madonna University and Lawrence Technological University. In this opportunity, Van Dyke, Warren Consolidated, Allen Academy, and University Preparatory Academy of Detroit (high needs LEA’s) join in a professional learning community with teachers from the Utica, Walled Lake Schools, Mt. Clemens, Center Line, Wayne Westland, Taylor, Chippewa Valley, and Plymouth Christian Academy. These 36 K-8 science teachers will experience PD which focuses on selected aligned science content with the application of mathematics and engineering embedded with the use of various technologies (STEM).

In this research, Cohort 3 composed of new members will be observed in their classrooms delivering an aligned science lesson both pre and post the STEM interventions. All participants will also be measured pre/post as to their professional technology application in their pedagogy and their personal attitudes and beliefs of STEM. Students of the participants will also be measured pre/post as to their STEM beliefs as well as specific gains in science content knowledge. Cohorts 1 and 2 will mentor the new participants and at their school sites will host a Family Engineering Night for their building, sponsor an after school STEM club, write an aligned STEM unit focused on a grade level appropriate topic, or write an article for a scientific journal which is published (MSTA, MDSTA, DACTM, MESTA, or NSTA).

Participants will meet on Saturdays once a month for the duration of the grant in a professional learning community format after the initial two meetings in June 2014 for the new participants. Stipends will be paid to the teacher participants, who can in turn choose to pay for up to ten hours of graduate credits from the two IHE’s. Over 100 hours of PD will be delivered during this 18 month grant.

<table>
<thead>
<tr>
<th>Michigan State University</th>
<th>140290-004</th>
<th>$250,000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project WRITE-3 (Writing, Reading, Inquiry and Technology Education)</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Project WRITE-3 (Writing, Reading, Inquiry and Technology Education) is a collaboration of the Michigan State University Colleges of Arts and Letters and Education and Owosso Middle and High Schools (Owosso, MI); Carman-Ainsworth Middle and High Schools (Flint, MI), and Powers Catholic High School (Flint, MI). Project WRITE-3 (PW-3) provides teacher professional development aimed at improving student writing and thinking. Continuing (C-AHS, PHS) and new (C-AMS, OHS, LHS, OMS) teachers begin in a scoring workshop using the National Writing Project’s Analytical Writing Continuum rubric, developing both holistic and analytical scores for their students’ papers. With a heightened understanding of the specific strengths and needs of their student writers, teachers develop inquiry-, problem-, and project-based writing assignments that contain critical rhetorical information and are broken into sequential units based on the demands they place on students, allowing the explicit teaching of the (meta) cognitive strategies and practices successful writers use. The project addresses students’ engagement with and attitude toward writing (and school, in general) through its focus on problems and projects that address student concerns and community...
Conducted in a technology-laced environment, PW-3 demonstrates the use of technologies as tools for improving student writing and learning and as platforms for developing new forms of writing. The PW-3 approach not only prepares students for college and career, but for community engagement and civic responsibilities.

<table>
<thead>
<tr>
<th>Michigan Technological University</th>
<th>140290-016</th>
<th>$189,103</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Educators’ Professional Development Institute Series (EPDIS): Engaging Students in the Standards for Mathematical Practice</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This Project aims to help 30 middle and high school mathematics teachers learn to engage their students in the Common Core Standards for Mathematical Practice (SMP).

Project activities focus on:

1. understanding the meaning of the eight SMP;
2. developing a vision of what it looks like for students to engage in the SMP;
3. providing opportunities for teachers to implement the SMP in their classrooms and reflect on the outcomes; and
4. considering teaching practices (e.g., task design, teacher questioning, mathematical discussion, UDL) that support the effective implementation of the SMP. Professional learning activities include week-long summer institutes at the start and end of the project, along with five full-day meetings during the included academic year. The institutes will be grounded in examining artifacts of classroom practice and the academic year activities will be focused on lesson study.

The Project is a collaborative effort between Michigan Technological University, Western Upper Peninsula Center for Science, Mathematics and Environmental Education and the Glenn T. Seaborg Center. School partners are from a seven county area in the west and north central Upper Peninsula, with Ironwood Area School District, L’Anse Area Public Schools, and Ewen-Trout Creek Schools serving as high need LEA partners.

<table>
<thead>
<tr>
<th>Saginaw Valley State University</th>
<th>140290-008</th>
<th>$237,921</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Civics, Government &amp; Citizenship Education across the Social Studies</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The professional development program will serve at least 30 teachers from the Saginaw Public School District (LEA partner) and the Saginaw Valley State University service area during the 2014-2015 school year. Partners at SVSU are the Colleges of Education and Arts and Behavioral Sciences. The program will offer six all day workshops and two one-week institutes. Workshop and course content are focused on Civics, Government & Citizenship Education and related pedagogical strategies designed to increase student learning and performance (based on responses from needs survey) and will address Michigan’s content and process standards at the middle and secondary levels (grades 6-12). Participants will plan and teach curriculum and evidenced based strategies after the professional development workshops. Teachers will videotape lessons, share, and reflect on lessons and artifacts of student learning with colleagues in Professional Learning Communities. Two tenured faculty members in the Department of Political Science will offer specialized content that supports Michigan Standards for Social Studies/Civics, Common Core Standards for ELA in the Social Studies, and the C3 Framework for the Social Studies. Faculty in the Department of Middle and Secondary Education will model inquiry-based teaching and learning.
### Mathematics Achievement through Regional Collaboration (MARC)

Mathematics Achievement through Regional Collaboration (MARC) is a partnership between Saginaw Valley State University, the SVSU Regional Mathematics and Science Center, Bangor Central Elementary, Bangor Lincoln Elementary, Bangor West Elementary, Christa McAuliffe Middle School (Bangor), Standish Elementary, Sterling Elementary, Standish-Sterling Middle School, Immanuel Lutheran and Zion Lutheran schools. MARC will provide sustained professional development for K-8 teachers aimed at impacting student achievement by improving teacher mathematics content knowledge and pedagogy. The project includes 96 hours of professional development designed to address content in the Common Core State Standards, specifically the domains of Operations & Algebraic Thinking, Expressions & Equations, and Geometry. These domains were chosen based on the results of the Teacher Professional Development Needs Survey. The format of this project will include summer institutes, after school mathematics learning community meetings, and workshops during the academic year. Professors from the SVSU College of Science, Engineering, and Technology and College of Education will facilitate the professional development through a team approach with the intent of increasing teacher participants’ mathematics content knowledge, their use of inquiry-based instructional strategies, and their use of teaching/learning strategies that meet the needs of students with diverse abilities.

### Collaborative Opportunities for Teaching Excellence in Mathematics (CORE – M)

The Project provides special education teachers in Detroit Public Schools (DPS) with content information, strategies and support to improve instruction with high-need children in the state’s most impoverished area. Aspects of the project that position it for success include:

- It builds on lessons learned from past MDE-funded projects where WSU teamed with DPS to provide effective professional development (PD) to special education teachers.
- The collaborative planning committee consists of committed professionals with expertise and experience in mathematics, math education and special education.
- Content of the PD is based on identified needs of the target population, the common core standards and best practices identified by a review of the current literature.
- Multiple methods are used to reach the target population with courses, a summer institute and at-school mentoring.
- The PD will include effective strategies to reach high-need students in Detroit middle/high schools.
- The timeline is realistic.
- A mixed methods approach to evaluation is used where both qualitative and quantitative measures are used.
- The evaluation is comprehensive including surveys, interviews, course assessment, observation and portfolio examination

Our collaborative team is prepared, committed and ready to move ahead with the project that will produce positive outcomes in Michigan’s most impoverished school district.