COVER PAGE

| Grade Level(s) Targeted: High School Number of Targeted Participants: 25 | Number of Targeted LA GEAR UP Schools: 2 | | | | | |
|--|--|--|--------------------------|--|--|--|
| Name(s) of Submitting Institution(s) of H | | ation (Include Branch/Campus/Other | Components): | | | |
| Address of Institution of Higher Education Department of Mathematics, Computer | | | | | | |
| Title of Proposed Project: Professiona | l Developn | nent for Teachers of Mathematics | | | | |
| Funds being requested for each fund | ing cycle: | | | | | |
| July 1, 2012 – September 30, 2012 \$61,551 | | October 1, 2012 – June 15, 2013 \$94,866 | ~ | | | |
| Matching funds from partners: | | | | | | |
| IHE: \$72,356 | | High-need LEA(s): *Calcasieu, *Allen Parishes Other: \$0 | | | | |
| The signatories certify that the institution laws and regulations. | and the pr | | | | | |
| Name/Title/Institution (if different from the primary institution listed) | | Dept./Telephone No. Email Address | Signature | | | |
| Principal Investigator Sid Bradley Head DMCS | Science, 337-474-5 | ent of Mathematics, Computer and Statistics 5788 @mcneese.edu | Sa Bradley | | | |
| Co-Principal Investigator Dr. George F. Mead Jr., Interim Dean Dore' Graduate School | 337-475-5 | aduate School 3394 Icneese.edu | Sa Bradley Tenge mend | | | |
| Campus Head or Authorized Institutional Representative Dr. Phillip Williams | President 337-475-5 pwilliams | | Millell | | | |
| Dean, College of Education Dr. Wayne Fetter | 337-475-5 | of Education 5433 mcneese.edu | Wayne Fetter | | | |
| Dean, College of Arts and Sciences Dr. George F. Mead Jr. | 337-475-5 mead@m | cneese.edu | Feorge Meal | | | |
| Authorized Fiscal Agent Mr. Eddie P. Meche | 337-475-5 | Business Affairs 5501 Imcneese.edu | Cadri Pelles | | | |

PROJECT ABSTRACT

Name of Institution (Include Branch/Campus): McNeese State University

College/Department: College of Science,

Department of Mathematics, Computer Science, and Statistics

Principal Investigator:

Sid Bradley and George F. Mead Jr.

Phone: (337) 475-5788 Fax: (337) 475-5799

E-mail: sbradley@mcneese.edu

Title of Project:

Professional Development for Teachers of Mathematics

Abstract (maximum of 500 words): Address each item below in the order given:

(1) A brief paragraph describing the overall vision of the project

McNeese State University in cooperation with local LEA's (Region V) proposes to offer professional development for high school and middle school mathematics teachers. The project will provide cohort groups with the opportunity to make progress toward becoming SACS qualified to teach college level mathematics classes and/or receive a Master of Science degree in mathematics or Master of Education degree with a concentration in mathematics. The goal of this project is to allow teachers to earn at least twelve graduate hours of mathematics in three semesters. Participants will receive a Certificate of Completion upon completing all twelve hours of course work. Course work completed through the program will deepen participants' understanding of mathematics and, thereby, enable them to provide leadership for implementing the Common Core State Standards in their schools. Focus will be on high school and middle school teachers of mathematics with the intent of preparing them to participate in the dual enrollment program.

- (2) The project's specific content focus and measurable objectives
 - Participants will be introduced to a systematic development of calculus including sequences, limits, and continuity in Math 665 Analysis I.
 - Analysis II (Math 665) builds on Analysis I: A systematic development of the calculus including continuity, differentiation, integration, and series in Math 665 Analysis II.
 - Participants will develop an in-depth understanding of the theorems, concepts, techniques, and problems associated with secondary school mathematics in Math 603. Emphasis will be placed on topics that link to the Common Core State Standards related to Algebra and Number Systems.
 - Participants will be introduced to the branch of pure mathematics concerned with the properties of real numbers, and problems that are linked to this study in Math 602.
 - Participants will demonstrate the ability to communicate mathematical thinking and

instructional strategies with other teachers of mathematics.

- Participants will acquire the in-depth understanding of mathematics necessary to serve as leaders in implementing the Common Core State Standards.
- (3) The high-need LEA(s) and targeted schools/districts involved

McNeese State University in cooperation with local LEA's (Region V) proposes to offer professional development.

Region V Service Area – Calcasieu, Cameron, Jeff Davis, Beauregard and Allen Parishes High Need LEA's served are Calcasieu and Allen Parishes

(4) The participants for which the project is designed (i.e., classroom teachers, special ed teachers, paraprofessionals, and/or administrators)

The program is designed for individuals with the appropriate background who are currently teaching as well as those who are certified to teach mathematics at the high school or middle school level. Teachers will be recruited from state, charter, and parochial schools within the region.

(5) The number of days & contact hours during the summers & AY

The project will be administered over a period of three semesters beginning with the summer semester 2012 (4500 minutes of instruction), followed by fall 2012 (2250 minutes of instruction), and ending with spring 2013 (2250 minutes of instruction).

(6) The number of participants & content coaches

The project will serve twenty-five participants.

(7) The targeted grade levels

Teachers of mathematics at the high school and middle school level.

(8) The primary activities and proposed outcomes

Activities will cover investigations in the areas of: Mathematical Analysis, Number Theory, Algebra, and Discrete Mathematics. Participants will be assessed on learning objectives in each area and are expected to demonstrate a proficiency of 80%. An overall GPA of 3.0 on a 4 point scale is required in order to receive a Master's degree.

(Form 3 - 2012-13 LaSIP PD, Revised 8/11

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PROJECT PROGRESSION TIMELINE OF ACTIVITIES TABLE

| Time line | Contact Hours | Action/Activities | Measureable Objective for each activity | Staff Responsible |
|----------------|------------------|---|--|--|
| July 2012 | 90 hours | Math 665 Analysis I Math 603 Advanced Perspectives on Topics in Secondary Mathematics | Goal 1 Objective 1 Goal 2 Objective 1 Goal 3 Objective 1 and 2 | All staff present and responsible |
| Fall 2012 | 45 hours | Math 665 Analysis II | Goal 1 Objective 2 Goal 3 Objective 1 and 2 | Sid Bradley, George Mead, and Christine Gorton |
| Spring 2013 | 45 hours | Math 602 Number Theory | Goal 2 Objective 2 Goal 3 Objective 1 and 2 | Sid Bradley, George Mead, and Karen Aucoin |

(Form 4- 2012-13 LaSIP PD, Revised 8/2011

NARRATIVE

a) Rationale and Need for the Project

At the present time McNeese State University is able to meet the demand of dual enrollment courses in Region V. All dual enrollment classes are taught by SACS qualified instructors chosen by the Math Department. These instructors are teachers in the area high schools and all have previously taught on campus for DMCS. The expansion of the dual enrollment program is limited by the number of SACS qualified high school mathematics teachers. The pool of SACS qualified instructors produced by the 2009 – 2010 LaSIP grant helped meet the needs of the dual enrollment program. A remaining problem is that some of the current dual enrollment instructors are approaching retirement. In an effort to fill the void McNeese State University proposes to train additional dual enrollment instructors through professional development. At the request of Calcasieu Parish School Board, McNeese piloted three dual enrollment Math 113 classes in the Fall of 2006 in three area high schools. All students enrolling in dual enrollment Math 113 classes come on campus to take a departmentalized final. The passage rate for dual enrollment Math 113 sections has been extremely high when compared to the on campus passage rate and the Louisiana passage rate, both of which are in the 52% range. The passage rates for dual enrollment Math 170 and Math 231 which have been taught as Spring dual enrollment classes are also extremely high. Please see **Table 1** on page 7 for the history of McNeese Early Admission.

The Dean of Enrollment Management, the Director of Continuing Education, who coordinates the McNeese Early Admissions program, and the Math Department have worked closely with area school boards to provide Early Admission Math classes. Calcasieu Parish has agreed to welcome Early Admission students from Cameron, Beauregard and Jeff Davis parishes at their Sulphur, DeQuincy and Bell City sites and the Lake Charles-Boston Academy of Learning. All School Board curriculum directors have expressed interest in having their parish Math teaching personnel avail themselves of graduate level Mathematics courses to become SACS certified. Please see <u>Table 2</u> on pages 8-14 to see Dual Enrollments in the Five Parish Area for the last couple of years. Included are the specific math courses taught, each parish with the schools where the courses were offered, the number of enrollments and the completion percent ratio per semester.

b) Project Design

Professional Development for Teachers of Mathematics is focused on improving the content knowledge of its participants. The project will build a community of teachers in the five-parish area who can communicate and support each other's efforts to promote student learning. This community will include teachers of mathematics at state, charter, and parochial schools within the region. Our project will focus on the knowledge and skills required of teachers in the areas of analysis, number theory, algebra, and discrete mathematics. Participants will develop skills that implement pedagogical and instructional techniques to make connections between these content areas and student learning. The primary goal of this project is to develop teachers of mathematics in Region V that have at least twelve of the eighteen graduate hours in mathematics as required by SACS to teach dual enrollment classes. Furthermore, this project strongly supports the three goals LaSIP has adopted which are: Plan effective PD, Increase leadership capacity, and increase student achievement by increasing teacher content knowledge.

TABLE 1.

| MCNE | ESE E | ARLY | ADMI | SSION | MATI | I OFF | CAMPU | JS COU | URSE I | HISTO | RY |
|---------------------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| Year | Fall 06 | Spr 07 | Fall 07 | Spr 08 | Fall 08 | Spr 09 | Fall 09 | Spr 10 | Fall 10 | Spr 11 | Fall 11 |
| | | | | | | | | | | | |
| Math 113 | 3 | | 3 | 3 | 12 | 2 | 13 | 4 | 19 | 5 | 20 |
| Total Enrollment | 41 | | 48 | 52 | 190 | 31 | 207 | 62 | 362 | 86 | 385 |
| Passage Rate | 100% | | 98% | 95% | 100% | 96% | 98% | 96% | 97% | 94% | 99% |
| | | | | | | | | | | | |
| Math 170 | | 2 | | 3 | | 8 | | 6 | | 8 | 1 |
| Total Enrollment | | 24 | | 29 | | 93 | | 65 | | 114 | 9 |
| Passage Rate | | 100% | | 89% | | 92% | | 100% | | 100% | 100% |
| | | | | | | | | | | | |
| Math 175 | | | | | | 1 | | | | | |
| Total Enrollment | | | | | | 4 | | | | | |
| Passage Rate | | | | | | 100% | | | | | |
| | | | | | | | | | | | |
| Math 231 | | | | 1 | | | | 1 | | 5 | |
| Total Enrollment | | | | 8 | | | | 17 | | 80 | |
| Passage Rate | | | | 100% | | | | 100% | | 96% | |

Table Two: Early Admission Math Class History

Math 113

| Semester | Parishes Participating | School Host Sites | Schools Represented | # of Sections | Enrollment | Passage Rate |
|-------------|---|---|--|---------------|------------|--------------|
| Fall 2006 | Calcasieu | Calcasieu: Bell City DeQuincy Westlake | Calcasieu: Bell City, DeQuincy, Starks, Westlake | 3 | 41 | 100% |
| Fall 2007 | Calcasieu | Calcasieu: Sam Houston Sulphur Westlake | Calcasieu: Sam Houston, Starks, Sulphur, Vinton, Westlake | 3 | 48 | 98% |
| Spring 2008 | Calcasieu Jeff Davis | Calcasieu: DeQuincy Sulphur Jeff Davis: Welsh | Calcasieu: DeQuincy, Sulphur Jeff Davis: Hathaway, Jennings, Lacassine, Lake Arthur, Welsh | 3 | 52 | 95% |
| Fall 2008 | Calcasieu Beauregard Allen Jeff Davis Cameron | Calcasieu: Bell City DeQuincy Iowa Sam Houston (2) Sulphur Westlake Beauregard: DeRidder Allen: Kinder Oberlin Jeff Davis: Welsh Cameron: Hackberry | Calcasieu: Bell City, DeQuincy, Iowa, Sam Houston, Starks, Sulphur, Vinton, Westlake Beauregard: DeRidder Allen: Kinder, Fairview, Oberlin Jeff Davis: Welsh, Lacassine Cameron: Hackberry | 12 | 190 | 100% |

| Spring 2009 | Calcasieu Jeff Davis | Calcasieu: Sulphur Jeff Davis: Jennings | Calcasieu: Starks, Sulphur Jeff Davis: Jennings, Lake Arthur | 2 | 31 | 96% |
|-------------|---|---|---|----|-----|-----|
| Fall 2009 | Calcasieu Beauregard Allen Jeff Davis Cameron | Calcasieu: Bell City DeQuincy Iowa (2) Sam Houston Sulphur (2) Westlake Beauregard: South Beauregard Allen: Kinder Oberlin Jeff Davis: Hathaway Welsh | Calcasieu: Bell City, DeQuincy, Iowa, Sam Houston, Sulphur, Vinton, Westlake Beauregard: Merryville, South Beauregard Allen: Kinder, Oakdale, Oberlin Jeff Davis: Hathaway, Lacassine Lake Arthur, Welsh Cameron: Grand Lake, South Cameron | 13 | 207 | 98% |
| Spring 2010 | Calcasieu Beauregard Jeff Davis Cameron | Calcasieu: Sulphur Beauregard: DeRidder East Beauregard Jeff Davis: Jennings | Calcasieu: Sulphur, Vinton Beauregard: DeRidder, East Beauregard Jeff Davis: Elton, Jennings | 4 | 62 | 96% |

| Fall 2010 | Calcasieu Allen Beaureard Jeff Davis | Calcasieu: Bell City DeQuincy Iowa (2) Sam Houston (3)* Sulphur (3) Washington-Marion Westlake Allen: Kinder* Oberlin* Beauregard: South Beauregard (2)* Jeff Davis: Hathaway Jennings* Welsh* * - LASIP Grant Trained Instructor | Calcasieu: Bell City, DeQuincy, Iowa, Sam Houston, Starks, Sulphur, Vinton, Washington- Marion, Westlake Allen: Kinder, Oakdale, Oberlin, Reeves Beauregard: South Beauregard Jeff Davis: Elton, Hathaway, Jennings, Lacassine, Lake Arthur, Welsh Cameron: Grand Lake | 19 | 362 | 97% |
|-------------|---|---|--|----|-----|-----|
| Spring 2011 | Calcasieu Allen Beauregard | Calcasieu: LaGrange* Vinton* Allen: Oakdale* Beauregard: DeRidder* East Beauregard* * - LASIP Grant Trained Instructor | Calcasieu: LaGrange, Vinton Allen: Oakdale Beauregard: DeRidder, East Beauregard | 5 | 86 | 94% |

| Fall 2011 | Calcasieu Allen Beauregard Jeff Davis | Calcasieu: Bell City DeQuincy Iowa Sam Houston (3)* Sulphur (3) Vinton* Washington-Marion* Westlake Allen: Kinder* Oberlin* Beauregard: DeRidder (2)* South Beauregard* | Calcasieu: Bell City, DeQuincy, Iowa, Sam Houston, Starks, Sulphur, Vinton, Washington-Marion, Westlake Allen: Kinder, Oakdale, Oberlin, Reeves Beauregard: DeRidder, South Beauregard Jeff Davis: Elton, Hathaway, | 20 | 385 | 99% |
|-----------|--|---|---|----|-----|-----|
| | | Kinder* | Beauregard: | | | |
| | | Beauregard: | Beauregard | | | |
| | | | | | | |
| | | Hathaway Jennings* | Lacassine, Lake Arthur, Welsh | | | |
| | | Welsh* * - LASIP Grant Trained Instructor | | | | |

Math 170

| Semester | Parishes Participating | School Host Sites | Schools Represented | # of Sections | Enrollment | Passage Rate |
|-------------|--|---|---|---------------|------------|--------------|
| Spring 2007 | Calcasieu | Calcasieu: Bell City Westlake | Calcasieu: Bell City, Westlake | 2 | 24 | 100% |
| Spring 2008 | Calcasieu Jeff Davis | Calcasieu: Bell City Sam Houston Westlake | Calcasieu: Bell City, Sam Houston, Westlake Jeff Davis: Lacassine | 3 | 29 | 89% |
| Spring 2009 | Calcasieu Allen Beauregard Jeff Davis | Calcasieu: Bell City DeQuincy Iowa Sam Houston (2) Westlake Allen: Oberlin Beauregard: DeRidder | Calcasieu: Bell City, Iowa, Sam Houston, Starks, Vinton, Westlake Allen: Oberlin Beauregard: DeRidder, South Beauregard Jeff Davis: Lacassine | 8 | 93 | 92% |
| Spring 2010 | Calcasieu Cameron Jeff Davis | Calcasieu: Bell City Iowa (2) Sam Houston Westlake Jeff Davis: Hathaway | Calcasieu: Bell City, Iowa, Sam Houston, Westlake Cameron: Grand Lake, South Cameron Jeff Davis: Hathaway, Lacassine | 6 | 65 | 100% |

| Spring 2011 | Calcasieu Allen Beauregard Jeff Davis | Calcasieu: Bell City Iowa Sam Houston Washington-Marion Allen: Oberlin Beauregard: South Beauregard* Jeff Davis: Hathaway Jennings* *- LASIP Grant Trained Instructor | Calcasieu: Bell City, Iowa Sam Houston, Washington-Marion Allen: Oberlin Beauregard: South Beauregard Jeff Davis: Hathaway, Jennings, Lacassine Lake Arthur, Welsh | 8 | 114 | 100% |
|-------------|--|---|--|---|-----|------|
| Fall 2011 | Calcasieu | Calcasieu: Vinton* * - LASIP Grant Trained Instructor | Calcasieu: Vinton | 1 | 9 | 100% |

Math 175

| Semester | Parishes Participating | School Host Sites | Schools Represented | # of Sections | Enrollment | Passage Rate |
|-------------|------------------------|-------------------|---------------------|---------------|------------|--------------|
| Spring 2009 | Allen | Allen: Kinder | Kinder | 1 | 4 | 100% |

Math 231

| Semester | Parishes Participating | School Host Sites | Schools Represented | # of Sections | Enrollment | Passage Rate |
|-------------|-------------------------|--|--|---------------|------------|--------------|
| Spring 2008 | Calcasieu | Calcasieu: Sulphur | Calcasieu: Sulphur | 1 | 8 | 100% |
| Spring 2010 | Calcasieu | Calcasieu: Sulphur | Calcasieu: Sulphur | 1 | 17 | 100% |
| Spring 2011 | Calcasieu Beauregard | Calcasieu: Sam Houston* Sulphur (3) Beauregard: South Beauregard* * - LASIP Grant Trained Instructor | Calcasieu: Sam Houston, Starks, Sulphur Beauregard: South Beauregard | 5 | 80 | 96% |

i) Measureable Objectives

2012-13 LaSIP PROFESSIONAL DEVELOPMENT PROJECTS Measureable Objectives Worksheet (1)

<u>LaSIP Goal 1</u>: Increase student achievement on State high-stakes testing.

Who: Teachers of Mathematics

What: Participants will be introduced to a systematic development of calculus including sequences, limits, and continuity in Math 665 Analysis I.

How: Progress will be measured through classroom presentations to peers, participation in collaborative group activities, classroom discussions, and testing.

When: Summer 2012 Proficiency Level: 80%

Goal 1, Objective 1: Participants will demonstrate knowledge of the development of calculus including sequences, limits, and continuity in Math 665 Analysis I at a minimum proficiency level of 80% as measured through classroom presentations to peers, participation in collaborative group activities, classroom discussions, and testing.

Supporting outcomes:

- use exact definitions in careful proofs and gain skills in precise logical thinking
- understand and apply the basic axioms of the real number system, specifically the least upper bound axiom
- understand the definition of convergence of a real sequence and prove basic properties of convergent sequences
- apply the precise definitions of the limit of a function and of the continuity of a function

Who: Teachers of Mathematics

What: Analysis II (Math 665) builds on Analysis I: A systematic development of the calculus including continuity, differentiation, integration, and series in Math 665 Analysis II.

How: Progress will be measured through classroom presentations to peers, participation in collaborative group activities, classroom discussions, and testing

When: Fall 2012

Proficiency Level: 80%

Goal 1, Objective 2: Participants will demonstrate knowledge of the development of calculus including continuity, differentiation, integration, and series in Math 665 Analysis II at a minimum proficiency level of 80% as measured through classroom presentations to peers, participation in collaborative group activities, classroom discussions, and testing. Supporting Outcomes:

- understand the intermediate and extreme value theorems
- apply the precise definition of derivative
- apply the Mean Value Theorem
- apply the definition Riemann integral
- understand the Fundamental Theorem of Calculus

2012-13 LaSIP PROFESSIONALDEVELOPMENT PROJECTS Measureable Objectives Worksheet (2)

LaSIP Goal 2: Plan effective PD based on the high-need LEA(s)/schools' data-driven needs and developed using research-based PD strategies that will take place in summer institutes, during the academic year (AY), and/or through on-line or web-based assignments and job-embedded activities.

Who: Teachers of Mathematics

What: Participants will develop an in-depth understanding of the theorems, concepts, techniques, and problems associated with secondary school mathematics in Math 603. Emphasis will be placed on topics that link to the Common Core State Standards related to Algebra and Number Systems.

How: Progress will be measured through classroom presentations to peers, participation in collaborative group activities, classroom discussions, and testing.

When: Summer 2012 Proficiency Level: 80%

Goal 2, Objective 1: Participants will develop an in-depth understanding of the theorems, concepts, techniques, and problems associated with secondary school mathematics in Math 603 at a minimum proficiency level of 80% as measured through classroom presentations to peers, participation in collaborative group activities, classroom discussions, and testing. Supporting Outcomes:

- understand extensions and generalizations of theorems associated with traditional secondary mathematics topics and construct proofs of selected theorems
- analyze common problems of secondary school mathematics from a deeper mathematical level
- understand connections between ideas that may have been studied separately in different undergraduate mathematics courses
- understand alternate definitions, language, and approaches to mathematical ideas
- demonstrate knowledge of the historical contexts in which mathematical concepts arose
- demonstrate alternate ways of approaching problems, including methods with and without calculator and computer technology

Who: Teachers of Mathematics

What: Number Theory (Math 602): Participants will be introduced to the branch of pure mathematics concerned with the properties of real numbers, and problems that are linked to this study.

How: Progress will be measured through classroom presentations to peers, participation in collaborative group activities, classroom discussions, and testing.

When: Spring 2013 **Proficiency Level**: 80%

Goal 2, Objective 2: Participants will demonstrate knowledge of the branch of pure mathematics concerned with the properties of real numbers, and problems that are linked to this study in Math 602 at a minimum proficiency level of 80% as measured through classroom presentations to peers, participation in collaborative group activities, classroom discussions, and testing.

Supporting Outcomes:

- utilize techniques for locating primes and answer questions concerning the distribution of prime numbers
- understand congruencies and will be able to utilize techniques like the Chinese Remainder theorem to solve linear congruencies

Measureable Objectives Worksheet (3)

<u>LaSIP Goal 3</u>: Increase leadership capacity and pedagogical skills for target schools through school/district buy-in, school-based implementation, and mentoring during the AY.

Who: Teachers of Mathematics

What: Participants will demonstrate the ability to communicate mathematical thinking and instructional strategies with other teachers of mathematics

How: Progress will be measured through classroom presentations to peers, participation in collaborative group activities, classroom discussions.

When: Summer 2012, Fall 2012 and Spring 2013

Proficiency Level: 80%

Goal 3, Objective 1: Participants will demonstrate the ability to communicate mathematical thinking and instructional strategies with other teachers of mathematics at a minimum proficiency level of 80% as measured through classroom presentations to peers, participation in collaborative group activities, and classroom discussions.

Supporting Outcomes:

- use the language of mathematics to express ideas precisely
- analyze and evaluate the mathematical thinking and strategies of others as measured by a peer review rubric

Who: Teachers of Mathematics

What: Participants will acquire the in-depth understanding of mathematics necessary to serve as leaders in implementing the Common Core State Standards.

How: Progress will be measured through classroom presentations to peers, participation in collaborative group activities, classroom discussions, and testing.

When: Summer 2012, Fall 2012 and Spring 2013

Proficiency Level: 80%

Goal 3, Objective 2: Participants will demonstrate the ability to communicate mathematical thinking and instructional strategies with other teachers of mathematics at a minimum proficiency level of 80% as measured through classroom presentations to peers, participation in collaborative group activities, and classroom discussions.

Supporting Outcomes:

- use the language of mathematics to express ideas precisely
- analyze and evaluate the mathematical thinking and strategies of others as measured by a peer review rubric

(Form 4- 2010-11 LaSIP PD, Revised August 2009)

ii) Specific Content Mater/Classroom Instructional Strategies

Format of Program

Summer 2012

Math 665 - Analysis I, and Math 603 - Advanced Perspectives on Topics in Secondary Mathematics

Fall 2012

Math 665 – Analysis II

Spring 2013

Math 602 – Introduction to the Theory of Numbers

Courses Descriptions

Math 665 – Topics in Mathematical Analysis for Secondary Teachers

Selected topics in mathematical analysis chosen to prepare secondary teachers for courses in pre-calculus and calculus. This course may be repeated as topics vary to accrue a total of nine semester hours.

Math 602 – Introduction to the Theory of Numbers

Divisibility, primes, congruencies, quadratic residues, numerical functions, recurrence functions, Diophantine equations, continued fractions, distribution of primes.

Math 603 – Selections from Advanced Mathematics (Topic: Advanced Perspectives on Topics in Secondary Mathematics

An in-depth study of the theorems, concepts, techniques, and problems associated with secondary school mathematics. Emphasis will be placed on topics that link to the Common Core State Standards related to Algebra and Number Systems.

Textbooks to be used:

Math 665 Analysis I and II: A Friendly Introduction to Analysis [Paperback], Witold A.J. Kosmala (Author)

Ideas and methods of proof build upon each other and are explained thoroughly. This book covers both single and multivariable analysis. Chapter topics cover sequences, limits of functions, continuity, differentiation, integration, infinite series, sequences and series of functions, vector calculus, functions of two variables, and multiple integration.

Math 602 – Introduction to the Theory of Numbers

Friendly Introduction to Number Theory, A (4th Edition) [Hardcover], Joseph H. Silverman (Author)

This book is designed to introduce readers to the overall themes and methodology of mathematics through the detailed study of one particular facet—number theory. It includes many numerical examples, which are analyzed for patterns and used to make conjectures. Emphasis is on the methods used for proving theorems rather than on specific results.

Math 603 Advanced Perspectives on Topics in Secondary Mathematics

Mathematics for High School Teachers – An Advanced Perspective [Paperback], Zalman Usiskin (Author), Anthony L. Peressini (Author), Elena Marchisotto (Author), Dick Stanley (Author)

"Mathematics for High School Teachers—An Advanced Perspective is intended as a text for mathematics courses for prospective or experienced secondary school mathematics teachers and all others who wish to examine high school mathematics from a higher point of view. Preliminary versions of the book have been used in a variety of ways, ranging from junior and senior (capstone) or graduate mathematics courses for pre-service secondary mathematics education majors to graduate professional development courses for teachers. ... Knowing alternate approaches helps in making decisions regarding curriculum, selection of materials, and lesson plans. Being able to connect, extend, and relate mathematical ideas to each other and to the mathematics a student may take later helps in designing courses and responding to student questions. Having a sense of history and the stories behind the mathematics can make lessons more interesting and engaging for both teacher and student. Encountering the richness of the mathematics that is studied at the high school level helps us to understand why some students are turned on by that mathematics, while others have difficulty with it."

The intent of the program is to develop an understanding and working knowledge of the mathematical content that underlies the implementation of the Common Core State Standards. Each course will give participants the opportunity to develop a perspective including a deeper analysis of problems and concepts drawn from the Common Core State Standards for secondary mathematics. Instructional strategies will include collaborative group work in which participants link advanced topics to relevant standards. Leadership characteristics will be developed during classroom discussions as participants deal with the step by step analysis of the elements of assigned problems or situations. Participants will further demonstrate their potential as lead teachers by presenting key concepts, connections between mathematical ideas, and solutions of problems.

iii) Delivery Method

In order to be considered for participation in the program an individual must be either currently teaching or eligible to teach mathematics at the high school or middle school level. Teachers will be recruited from state, charter, and parochial schools within the region. The project will be administered over a period of three semesters beginning with the summer semester 2012 (4500 minutes of instruction), followed by fall 2012 (2250 minutes of instruction), and spring 2013 (2250 minutes of instruction). Summer classes will meet daily where as fall and spring classes will meet one night per week. Participants will be paid \$25 per hour under the guidelines of stipend option A. Project staff will conduct periodic advising sessions with individual participants to provide feedback and to promote implementation of new knowledge and behaviors.

iv) Collaborative Partnerships and Participant recruitment

Project staff will develop a brochure to be sent to all Region V high school and middle school teachers of mathematics informing them of requirements of the program. In addition to mailing the brochures the project staff will make recruiting visits to Region V high schools. The Director of Continuing Education (Betty Anderson) will also recruit as she visits Region V high schools.

c) Quality of Key Personnel

The project staff will be composed of the following individuals:

Mr. Sid Bradley, Project Director,

Head Department of Mathematics, Computer Science, and, Statistics (DMCS)

Administer the project, recruit, visit teachers, and teach in the project.

Dr. George F. Mead Jr., Project Co-Director

Dean College of Science and Interim Dean Dore' Graduate School

Recruit and teach in the project.

Dr. Karen Aucoin, Instructor for the Program

Professor DMCS, Assistant Department Head

Recruit, visit teachers, and teach in the project

Dr. Christine Gorton, Instructor for the Program

Assistant Professor DMCS

Recruit, visit teachers, and teach in the project

d) Project Evaluation

Success of the project will be measured by the number of teachers that complete four graduate courses in mathematics. Outcome results in the individual courses will determine modification to the curriculum as needed. Project staff will conduct periodic advising sessions with individual participants to facilitate retention. An additional measure of success will be the number of participants who complete additional coursework in order to be become SACS qualified to teach dual enrolment mathematics courses.

LOUISIANA SYSTEMIC INITIATIVES PROGRAM

PROPOSED PROJECT BUDGET REQUEST - FORM BR

PROJECT NAME: Professional Development for Teachers of Mathematics

PROJECT CONTENT AND STRAND FOCUS: Algebra and Numbers Systems

PROJECT DIRECTOR, UNIVERSITY:

| A | В | C | D | E | F |
|------------------------|--|--|---|-------------------------------------|-----------------------|
| Reference | Budget Item | Brief Description of Budget Item | Funds Requested 7/1/11-9/30/11 Max of \$80k for this period. | Funds Requested 10/1/11- 6/15/12 | Total Funds Requested |
| A. University Employ | ed Staff | | | | |
| 1 | Director/Faculty Member | Sid Bradley will be the project director, administer the project, recuit, visit teachers, and teach in the project. 1/12 of annual salary | 3,400.00 | 3,400.00 | \$ 6,800.00 |
| 2 | Co-Director/Faculty Member | George F. Mead Jr. recruit and teach in the project. | 0.00 | 0.00 | \$ - |
| 3 | Faculty Member | Karen Aucion recruit visit teachers and teach in the project. | 7,200.00 | 2,100.00 | \$ 9,300.00 |
| 4 | Faculty Member | Christine Gorton recruit , visit teachers, and teach in the project. | 6,400.00 | 1,900.00 | \$ 8,300.00 |
| 5 | Graduate Student | | 0.00 | 0.00 | \$ - |
| 6 | Secretary/Student Worker | To be selected | 1,000.00 | 0.00 | \$ 1,000.00 |
| 7 | Other (Specify) | | 0.00 | 0.00 | \$ - |
| 8 | Other (Specify) | | 0.00 | 0.00 | \$ - |
| 9 | | Total Salaries and Wages | \$ 18,000.00 | \$ 7,400.00 | \$ 25,400.00 |
| 10 | Fringe Benefits: Rate 30% | _ | 5,400.00 | 2,220.00 | \$ 7,620.00 |
| 11 | | Total Salaries, Wages, and Fringe | \$ 23,400.00 | \$ 9,620.00 | \$ 33,020.00 |
| B. Staff Not Universit | y Employed | | | | |
| 12 | Consultant | | 0.00 | 0.00 | 0.00 |
| 13 | Consultant | | 0.00 | 0.00 | 0.00 |
| 14 | Consultant | | 0.00 | 0.00 | 0.00 |
| 15 | | Total Staff Not University Employed | 0.00 | 0.00 | 0.00 |
| 16 | | Total Staff Costs | \$ 23,400.00 | \$ 9,620.00 | \$ 33,020.00 |
| C. Participant Suppor | rt | | | | |
| 17 | Stipends | | 22,500.00 | 67,500.00 | 90,000.00 |
| 18 | Employer Contributions on Stipends: Enter rate (TRSL 23.7%) | | 5,333.00 | 15,998.00 | 21,331.00 |
| 19 | Substitute Pay | | 0.00 | 0.00 | 0.00 |
| 20 | School Resource Materials | | 0.00 | 0.00 | 0.00 |
| 21 | Project Supplies | | 6,500.00 | 0.00 | 6,500.00 |
| 22 | Med Tax_1.45% | | 326.00 | 979.00 | 1,305.00 |
| 23 | Other | | | | |
| 24 | | Total Participant Support | \$ 34,659.00 | \$ 84,477.00 | \$ 119,136.00 |

| D. Travel | | | | | |
|-------------------|---------------------------|--------------------------------------|--------------|--------------|---------------|
| 25 | Staff Travel | | 1,500.00 | 0.00 | 1,500.00 |
| 26 | Participant Travel | | 0.00 | 0.00 | 0.00 |
| 27 | | Total Travel Costs | 1,500.00 | 0.00 | 1,500.00 |
| E. Indirect Costs | | | | | |
| 28 | Di | rect Costs Minus Participant Support | \$ 24,900.00 | \$ 9,620.00 | \$ 24,900.00 |
| 29 | Indirect Costs | Line 27 x 8% | 1,992.00 | 769.60 | 2,761.60 |
| 30 | | TOTAL FUNDS REQUESTED | \$ 61,551.00 | \$ 94,866.60 | \$ 156,417.60 |
| F. Core Costs | | | | | |
| 31 | Core Costs | \$ 152,156.00 | | | |
| 32 | Number of Participants | 25 | | | |
| 33 | Core Cost per Participant | \$ 6,086.24 | | | |

LaSIP PROFESSIONAL DEVELOPMENT RFP 2012-2013

PROJECT NAME: Professional Development for Teachers of Mathematics

PROJECT DIRECTOR, UNIVERSITY: Sid Bradley

| PROJECT DIRECTOR, UNIVERSITY: Sid Bradley | | | | |
|--|---|---|---|-----------------|
| A | В | C | D | E |
| Description | Type of Matching Funds (Cash or In-Kind) | Partner Providing Matching Funds (University, District, School, or Private) | Source of Funds (Federal, State, Local, or Private) | Cost Share |
| Staff: | | | | |
| Geroge F. Mead Jr. (2% of Annual Salary to recruit & selected topics) | In-Kind | McNeese State Univ. | State | 2,356.00 |
| | | | | 0.00 |
| | | | | 0.00 |
| Sub-Total Staff Cost Share | | | | \$ 2,356.00 |
| Participant Support: | | | | |
| Tutiion for 4 graduate courses (12 hours) for each of 25 participants at a rate of \$2,800 per participant | In-Kind | McNeese State Univ. | State | 70,000.00 |
| | | | | 0.00 |
| Sub-Total Participant Support Cost Share | | | | \$ 70,000.00 |
| Travel and Other Costs: | | | | |
| | | | | 0.00 |
| | | | | 0.00 |
| | | | | 0.00 |
| Sub-Total Travel and Other Cost Share | | | | \$ - |
| Indirect Costs: | | | | \$ - |
| COST SHARING TOTAL | | | | \$ 72,356.00 |

LaSIP 2012-2013 Professional Development RFP

BUDGET NARRATIVE - FORM BN

PROJECT NAME: Professional Develoment for Teachers of Mathematics

| PROJECT NAMI | OJECT NAME: Professional Develoment for Teachers of Mathematics | | | | |
|----------------------|---|--|--|---|--|
| PROJECT DIRE | CTOR/UNIVERSITY: Sid Bradley | | | | |
| A | В | С | D | E | |
| | | Section 1 | | | |
| Form BR Line Item | Staff Name and/or Title | Roles and Responsibilities | Cost Basis | Rationale/Justification | |
| 1 | Sid Bradley /Director - Faculty Member | Project dirctor, administer the project, recruit participants, visit teachers, and teach in the project. | 1/12 of annual salary (\$81,692) = \$6,800 | Director responsible for recruiting 25 participants from 5 parishes, curriculum develoopment, staff development, program problem resolutions and program administrative requirements, and teach in the project. | |
| 2 | George F. Mead Jr./Co-Director - Facutly Member | Recruit participants and teach in the project. | 2% of Dr. Mead's annual salary \$117,797 x 2% = \$2,356 | Will assist in recruiting, and course develoment. Responible for teaching components of selected courses. | |
| 3 | Karen Aucoin / Faculty Member | Recruit participants, visit teachers and teach in the project. | \$7,200 for teaching summer component plus \$2,100 for teaching a Fall 2012 overload = \$9,300 | Recruit particiapnts, visit teachers, and teach in the project. | |
| 4 | Christine Gorton/Faculty Member | Recruit participants, visit teachers and teach in the project. | \$6,400 for teaching summer component plus \$1,900 for each Spring and Interim session= \$8,300 | Recruit participants, visit teachers, and teach in the project. | |
| 6 | To be Selected/Sectretary - Student Worker | Responsible for filing papers, mailing communications, organizing and collecting data and other clerical duties. | 125 hours times \$8 per hour = \$1,000 | To assist in providing clerical information as required by LaSIP. | |

| Section 2 | | | | |
|----------------------|------------------|---|---|--|
| Form BR Line Item | Other Expenses | Description or Purpose | Cost Basis | Rationale/Justification |
| 17 | Stipends | Incentive to participate in the program and to offset the cost of taking courses. | \$20.00 per hour for 180 hours of class work X 25 participants = \$90,000 | Stipend rate of \$20 per contact hour is reasonable and is less the allowed \$25.00 per hour. In addidtion, students will be studying at least 3 hours for each class contact hour. |
| 21 | Project Supplies | Purchase of three text books per participant. One text book will be used for both Math 665 Analysis I and Math 665 Analysis II. The other two text will be used for Math 602 and Math 603 respectively. The total cost for a set of three books is \$260. | \$260 (Three books) times 25 participants for a total of \$6,500 | The books which we will provide to each participant will be used for 4 classes and will be used as a resources in their teaching. |
| 25 | Staff Travel | Traveling for recruiting of participants, visiting school sites and required LaSIP meetings | \$375 for each of 4 staff members travel needs =\$1,500 | Traveling for recruiting of participants, visiting school sites and required LaSIP meetings. |

ALLEN PARISH SCHOOL BOARD

Mrs. Carolyn Manuel, President, District 6

Mr. Gregory Monceaux, Vice Pres., District 5 Mrs. Alma Johnson, District 1 Mrs. Cathy Farris, District 2 P.O. Drawer C 1111 W. 7th Avenue Oberlin, Louisiana 70655 Phone (337) 639-4311 Fax (337) 639-2346 www.allen.k12.la.us

Mr. Michael Doucet, Superintendent

Mr. Keith Welch, District 3 Mr. Jason Turner, District 4 Mr. Brett Fawcett, District 7

TO: Sid Bradley

Head of the Mathematics Department

FROM: Clarice Papillion, Secondary Supervisor of Instruction

SUBJECT: Letter of Support for the LaSIP 2012-2013 Grant

The Allen Parish School District has continued to provide their high school students with rigorous college level courses because of their partnership with McNeese State University. Beginning with the 2012 graduates, students are required to obtain an extra math credit to meet the graduation requirements. This requirement opens a window of concern if we do not have enough teachers available to provide quality instruction. The grant proposal McNeese State is applying for would give high school mathematics teachers the tuition support to become SACS certified to teach the college level mathematics classes. In return, this would allow our students to take the courses at their school site with a SACS certified teacher. Thank you for your consideration of the LaSIP 12-13 grant for the future of our high school math students.



Beauregard Parish School Board

202 W. Third Street • P.O. Drawer 938 DeRidder, Louisiana 70634 Ph. (337) 463-5551 • Fax (337) 463-6735

David Vidrine, President

Charles Hudson, Vice President

Timothy J. Cooley, M. Ed., Superintendent

February 14, 2012

To Whom It May Concern:

The Beauregard Parish School System is in full support of the McNeese State University proposal to offer opportunities to high school teachers to further their field of expertise in order to provide certification which will enable them to teach college level dual credit mathematics classes in the high school setting.

The dual enrollment program offered by McNeese State University has been a superb benefit to our students who profit from engaging in college courses while simultaneously receiving high school Carnegie unit credit. Our students have been enlisting in the dual enrollment program through McNeese for over a decade, and numerous students have entered their post-secondary education program with college hours to their credit.

Furthermore, for our high school teachers to have the opportunity, expertise, and support of McNeese to receive excellent professional development which has made it possible for two of them to become certified to teach college-level courses on their high school campus has proved to be invaluable to our students and to the faculties of their school.

As we look forward to incorporating the Common Core State Standards into our curriculum in the 2012-2013 school year, the opportunity for additional mathematics teachers to receive professional development through the McNeese mathematics department in order to hone knowledge and skills while providing tuition support to achieve appropriate accreditation to offer dual enrollment courses throughout our school district will be highly beneficial for our students.

With Regards,

Timothy J. Cooley Superintendent

Calcasieu Parish School System Office of Curriculum and Instruction 600 South Shattuck Lake Charles, LA 70601 337/217-4160 Ext 1303

To: Grant Committee LaSIP Grant Proposal

It is a pleasure to forward a letter of support concerning the McNeese State University Department of Mathematics.

The Calcasieu Parish School System has worked in a dual-enrollment partnership with McNeese State University since the Fall of 2006. Prior to 2006 our CPSB student did engage in early admissions on a very limited basis with students covering all tuition costs.

Since 2005, Calcasieu has implemented a district-wide plan for college readiness that has emphasized the need for more students to attain collegiate credit while in high school. This plan was reinforced in 2010 the Louisiana Department of Education "Nine Critical Goals." With the assistance of McNeese State University, a variety of collegiate courses have been taught on our high school campuses. In some cases these classes were available tuition free to students.

For the past six years, the mathematics dual enrollment courses have been very successful in terms of growth in student enrollment and high levels of achievement. Integral to the success was the commitment of CPSB math teachers that met MSU qualification for collegiate instruction. The success rate with our high school students in collegiate mathematics courses far exceeds that of college freshman.

While we have expanded the availability of McNeese mathematics courses on our high school campuses, there remains room for growth. We continue to be restricted by the number of teachers in our employment that meet the complete qualifications necessary to provide the collegiate instruction. While the number of our teachers with master's degrees remains high, there are other credentials that are desirable to prepare our teachers for collegiate instruction.

It is our hope that our partnership will continue to grow and flourish. We encourage you to look favorably on the request of McNeese State University for funding in support of this positive venture.

Sincerely,

Pat Deaville, Director

High School Curriculum and Instruction

Calcasieu Parish Schools

JEFFERSON DAVIS PARISH SCHOOL BOARD

P.O. BOX 640 203 EAST PLAQUEMINE STREET JENNINGS, LOUISIANA 70546

DAVID CLAYTON
SUPERINTENDENT

TELEPHONE (337) 824-1834 FAX (337) 824-9737

February 14, 2012

To Whom It May Concern:

Jefferson Davis Parish has had the pleasure to work with McNeese State University since 2002 to offer Early Admission courses to high school students. This opportunity has been well-received by high school administrators, teachers, students, and parents. We feel very fortunate to be able to assist area students in their pursuit of postsecondary credits prior to their high school graduation.

We have proven our commitment to the Early Admissions program by providing classroom spaces, textbooks, software, and tuition to assist students in their endeavor to earn college credits prior to high school graduation. The addition of compressed video technology has increased our capability for Early Admissions courses.

Although we have several parish teachers who are credentialed to teach dual enrollment college math courses, there is always a need to expand our capacity to better meet our students' needs. Professional development opportunities are welcomed as we move into the transition phase of implementing the Common Core State Standards. Any support to help further develop the leadership skills of our parish math teachers is greatly appreciated and fully supported by the Jefferson Davis Parish School Board.

Sincerely,

David Clayton

David Clayton

Jefferson Davis Parish Superintender

Jefferson Davis Parish Superintendent

Virginia Sherrill Curriculum Supervisor

Ougena Sherrill

Cooperative Planning Efforts

Describe the process of collaboration between the high-need LEA(s), other targeted schools, and the IHE(s) in determining the needs of the LEA(s) in planning and writing this proposal. The statement should be endorsed and dated by an official from each participating institution. In addition, Letters of Support must be included in the appendices of the proposal.

Allen Parish School Board Michael Doucet, Superintendent

Signature

Date

Cooperative Planning Efforts

Describe the process of collaboration between the high-need LEA(s), other targeted schools, and the IHE(s) in determining the needs of the LEA(s) in planning and writing this proposal. The statement should be endorsed and dated by an official from each participating institution. In addition, Letters of Support must be included in the appendices of the proposal.

Beauregard Parish School Board
Timothy Cooley, Superintendent

Signatur

32

Cooperative Planning Efforts

Describe the process of collaboration between the high-need LEA(s), other targeted schools, and the IHE(s) in determining the needs of the LEA(s) in planning and writing this proposal. The statement should be endorsed and dated by an official from each participating institution. In addition, Letters of Support must be included in the appendices of the proposal.

Calcasieu Parish School Board Wayne Savoy, Superintendent

Signature

Date

Cooperative Planning Efforts

Describe the process of collaboration between the high-need LEA(s), other targeted schools, and the IHE(s) in determining the needs of the LEA(s) in planning and writing this proposal. The statement should be endorsed and dated by an official from each participating institution. In addition, Letters of Support must be included in the appendices of the proposal.

Slephanio Modrigue

02.15.2012

Cameron Parish School Board Sig Stephanie Rodrigue, Superintendent

Signature

Date

Cooperative Planning Efforts

Describe the process of collaboration between the high-need LEA(s), other targeted schools, and the IHE(s) in determining the needs of the LEA(s) in planning and writing this proposal. The statement should be endorsed and dated by an official from each participating institution. In addition, Letters of Support must be included in the appendices of the proposal.

| 5. | David Clayton | | 2/14/12 |
|----|-------------------------------------|-----------|---------|
| | Jefferson Davis Parish School Board | Signature | Date |
| | David Clayton, Superintendent | - | |

2012-13 LaSIP PROFESSIONAL DEVELOPMENT PROJECTS Memorandum Of Agreement Among Partners

| McNeese State University (Name of Sponsoring Institutions) | Professional Development for Teachers of Mathematics (Project Title) |
|--|--|
| Sid Bradley | Dr. George F. Mead, Jr. |
| (Principal Investigator) | (Co- Principal Investigator) |

of the partners listed below. This MOA documents the actual working partners who are responsible for contributing to the This cooperative agreement reflects the overall commitment as well as the specific responsibilities and the roles of each writing of the proposal, collecting and reporting data, and for the day to day success of the project.

| Type of Partner | Name of Active Partner | Title | IHE or District & School | Signature |
|--|----------------------------|-------------------------------|----------------------------------|---------------|
| Teacher Preparation Program (Required) | Dr. Wayne Fetter, Dean | Dean, College of Education | McNeese State University | Souper Tester |
| Dept./College of Science (Required) | Dr/ George F. Mead, Jr. | Dean, College of Science | McNeese State University | Terge mend |
| High-need Local Education Agency/Agencies (LEA – Required) | Michael Doucet | Superintendent | Allen Parish School Board | Miled Kleent |
| Additional Targeted Partners | Wayne Savoy | Superintendent | Calcasieu Parish School Board | My In |

(Form 8 - 2012-13 LaSIP PD, Revised 7/2011)

2012-13 LaSIP Request for Proposals:
Professional Development Projects for PK-12 Teachers of ELA\(\text{Literacy}\), Science, LIGO Science, & Mathematics
1

LOUISIANA SYSTEMIC INITIATIVES PROGRAM 2012-13 PROFESSIONAL DEVELOPMENT PROJECTS

CURRICULUM VITAE

| Name: Sid Bradley | | Current Position Title: Department Head, Department of Mathematics, Computer Science, and Statistics Project Position Title: Project Director | | |
|--------------------------|------------|---|----------------|--|
| INSTITUTION AND LOCATION | DEGREE | YEAR CONFERRED | FIELD OF STUDY | |
| Parsons College | B.S. | 1971 | Mathematics | |
| Truman University | M.A. | 1976 | Mathematics | |
| Lamar University | coursework | | Com. Sci. | |

Employment History

| McNeese State University | 1996-present | Math/C S | Head/DMCS |
|-------------------------------|--------------|----------|---------------------|
| McNeese State University | 1982-1996 | Math/C S | Assistant Professor |
| Northeast Missouri State Univ | 1980-1982 | Math | Instructor |
| Tate High School | 1973-1980 | Math | Instructor/Coach |
| Washington Jr. High | 1971-1973 | Math | Instructor/Coach |

Grants

- Professional Development for Teachers of Mathematics (LaSIP 2009-2010),
- Further Investigations Incorporating Mathematical Power for Elementary/Middle School Teachers (LaSIP 2006-2007 \$171,000)
- Investigations Incorporating Mathematical Power for Middle and High School Teachers of Mathematics (LaSIP 2005-2006 \$80,000)
- Investigations Incorporating Mathematical Power for Elementary School Teachers (LaSIP 2005-2006 \$202,000)
- Investigations Incorporating Data Analysis, Probability, Discrete Math, Patterns, Relations Functions in Elementary and Middle School Mathematics (LaSIP 2004-2005 \$212,000)
- Investigations Incorporating Data Analysis, Probability, Discrete Math, Patterns, Relations, and Functions in Elementary School Mathematics (LaSIP 2004-2005 \$150,000)
- Investigations Incorporating Number, Number Relations, and Measurement in Elementary and Middle School Mathematics," (LaSIP 2003-2004 \$140,000)

- Investigations Incorporating algebra and Geometry in Elementary and Middle School Mathematics," (LaSIP 2002-2003 \$140,000)
- "Summer In-service on Integrated Algebra and Geometry for Ninth Grade Teachers," (LaSIP 1993-1994 \$90,000)
- "A Certification and Mathematics Training Program for Secondary and Middle School Teachers" (Title II \$40,000 each year 87-88, 88-89, 89-90, 90-91, 91-92, 92-93, 93-94)
- "Mathematics Laboratory Computer-Version" (Instructional Grant Northeast Missouri State University 1981 \$1,500)

Scholarly Activity

- Mildred Scott Professorship in Math, "Professional Development for Math Faculty in Conducting Writing Enriched Courses," Spring 2009
- "Integer Sums," LATM State Conference, Fall 2008
- "Carpentry = Algebra + Geometry," LATM State Conference, Fall 2006
- "Frolicking Fractions a Firm Foundation for the Future" NCTM National Conference, Spring 2004
- "Creating a Positive Culture in the Mathematics classroom," LATM State Conference Fall 2003
- "Making Train Connections with Math Connections," LATM State Conference, Fall 1993
- "Graphics Calculator for High School Mathematics Teachers," Calcasieu Parish, Spring, 1991
- "FX-7000 Graphics Calculator," MAA Regional Meeting, Fall 1991
- "Teacher Retraining," Calcasieu Parish, 1989,
- "Data Structures Trees," Lafayette Parish, 1989
- "The Apple Computer and Student Involvement in CAI," NCTM Regional Meeting, 1986
- "Implementing Computer Literacy Through Assorted Techniques," LAQUE Conference, 1986
- "CAI Architecture in Junior High Mathematics," NCTM Regional Meeting, 1984
- "Hands-On Approach to Application Software," Author/Editor, 1984
- "Introductory Algebra," Participating Author, 1982
- "Remedial Mathematics Modules," Escambia County, FL, 1979

Professional Organizations

NCTM, LATM, Phi Delta Kappa, MAA, Pi Mu Epsilon

LOUISIANA SYSTEMIC INITIATIVES PROGRAM 2012-13 PROFESSIONAL DEVELOPMENT PROJECTS

CURRICULUM VITAE

| Name: Dr. George Mead, | Jr. | Current Position Title: Dean, College of Science, Interim Dean, Dore' Graduate School Project Position Title: Co-Director | | |
|--|--------|---|----------------|--|
| INSTITUTION AND LOCATION | DEGREE | YEAR CONFERRED | FIELD OF STUDY | |
| University of South Florida, Tampa, Florida | M.A. | 1977 | Mathematics | |
| University of S. Florida Tampa, Florida | Ph.D | 1980 | Mathematics | |

| EXPERIENCE | 1981-present McNeese State University | | | |
|---------------|--|--|--|--|
| | 1983-1995 Department Head, Mathematics, Computer and Statistics | | | |
| | 1977-1981 Chairman Math Department (7-12) Berkeley Preparatory School, Tampa Florida | | | |
| | 1973-1981 Graduate Teaching Assistant/Visiting Lecturer University of South Florida, Tampa | | | |
| | 1972-1973 Coordinator of Religious Education, Diocese of St. Petersburg, St. Petersburg, | | | |
| | 1968-1972 Instructor of mathematics and physics Berkeley Prep School, Tampa | | | |
| MEMBERSHIPS | Mathematical Association of America (MAA), National Council of Teachers of Mathematics (NCTM), Louisiana Association of Teachers of Mathematics (LATM) Calcasieu Parish Association of Teachers of Math, Phi Kappa, Pi Mu Epsilon | | | |
| PRESENTATIONS | Numerous presentations at State and regional meetings for MAA, NCTM, and LATM | | | |
| GRANTS | Project Director for the following funded projects: LAMP 1995-Present Upward Bound Regional Center 1991-92 | | | |
| | BOR/Eisenhower Mathematics Teacher Retraining Program 1987-1993 DRIVE (JOBMATCH) 1986-1995 ABLE(JOB MATCH) 1989-1991 LaSip Projects 1993-present Local Projects for teacher inservice | | | |
| | projects 1556 prosent Doesn't rejects for teacher inservice | | | |

2012-13 LaSIP PROFESSIONAL DEVELOPMENT PROJECTS CURRICULUM VITAE

| Name: Karen D. Aucoin | | Position Title: Professor, Department of Mathematics, Computer Science, and Statistics, McNeese State University Project Position Title: Instructor | | |
|--------------------------------|--------|---|----------------|--|
| INSTITUTION AND LOCATION | DEGREE | YEAR CONFERRED | FIELD OF STUDY | |
| Louisiana State University | Ph.D | 1993 | Mathematics | |
| Louisiana State University | M.S. | 1990 | Mathematics | |
| Northeast Louisiana University | B. S. | 1988 | Mathematics | |
| | | | Education | |

EMPLOYMENT

August 1993-present -McNeese State University

PROFESSOR OF MATHEMATICS August 2008- present

ASSOCIATE PROFESSOR OF MATHEMATICS August 1998- 2008

ASSISTANT PROFESSOR OF MATHEMATICS August 1993-1998

PUBLICATIONS

Aucoin, K., Dumesnil, J. and Hildebrant, J. "The structure of commutative semigroups with the ideal retraction property" Semigroup Forum(2004), vol.68, pp.202-208

Aucoin, K. ,Dumesnil, J. and Hildebrant, J. "Semigroups with the ideal retraction property" Semigroup Forum (2003), vol. 66, pp.416-432.

Aucoin, K. and Benningfield, K. "Extending ideals in regular topological semigroups" Semigroup Forum (1999), vol.59, pp.175-178.

Aucoin, K., "The structure of commutative semigroups with the ideal extension property. "Semigroup Forum (1999), vol. 58, pp. 175-189.

Aucoin, K., "On the congruence extension property for compact semigroups." Semigroup Forum (1996), vol. 52, pp. 157-162.

Aucoin, K., "The structure of commutative ideal semigroups." Semigroup Forum (1995), vol. 50, pp. 295-300.

PRESENTATIONS (Last 5 years)

- "Patterns, Tilings, Sequences, and Identities," (co-presenter- Christine Gorton)LATM State Conference, Fall 2011
- "Rational or Irrational: That is the Question", MSU Teaching and Learning Conference, Summer 2011
- "Clever Counting with Fibonacci Dominoes", SWLTM Mini Conference, Spring 2011
- "Fibonacci Dominoes," MSU Teaching and Learning Conference, Summer 2010
- "Introducing Students to the Joy of Mathematical Discovery," College of Science Colloquium, Fall 09
- "It's Great to Iterate," (co-presenter-Christine Gorton) LATM State Conference, Fall 09
- "It's Great to Iterate: Stimulating Mathematical Inquiry among Students of all Ages," MSU Teaching and Learning Conference, Summer 09
- "An experiment with peer review in a transition course" LA/MS MAA Sectional Meeting, 2008.
- "Calculator use vs. pencil and paper computation: The ongoing debate" Southwest Louisiana Teachers of Mathematics Conference, 2007.
- "Fostering familiarity with examples in abstract algebra" Mathfest (National summer meeting of the MAA), Knoxville, TN, 2006.

GRANTS:

- Co-Investigator (with Harold Stevenson as P.I.) for NSF E-STEM grant (2006)
- Endowed Professorship in Science (2006)
- Member of the design/writing/implementation team for the LASIP Grant: Investigations Incorporating Mathematical Power for Elementary School Teachers 2004-2005, 2005-2006, 2006-2007.
- Alumni Undergraduate Research grant with Tina Mote -2005
- Shearman Research Initiative Grant funded in 1998
- Co-Investigator (with W. Denny and N.T.McDaniel), LEQSF Grant (1997) Fellowships for Recruitment of Graduate Students for the Mathematical Sciences
- LASIP Grant (1996) for Visual Math with Judy Vail, Calcasieu Parish School Board

RECENT INSTITUTIONAL AND PROFESSIONAL SERVICE:

- Assistant Department Head (Fall 2003- present)
- Secondary K-12 Advisory Council (2006-present)(Co-chair 2007-present)
- MSU PARCC Leadership Team (2011-present)
- QEP Advisory Council (2011-present)
- Responsible for Preparation of NCTM/NCATE Program Report for the
- Preparation of Secondary Mathematics Teachers (2010)
- NCATE- Standard 2 Committee (2010)
- Council on General Education Assessment (Spring 2006-present)
- ComStem Faculty Leadership Team (2005-2010)
- Academic Advisor (2001-present)
- DMCS Textbook Coordinator (2000-present)
- Mathematics Education Curriculum coordinator (2005-present)

HONORS:

- Nominated by DMCS for Distinguished Faculty Award (1998-99)
- Nominated by LSU faculty for 1993 Distinguished Dissertation Award
- LSU Board of Regents Fellowship, 1988-1992.
- Highest Ranking Member of Graduating Class, NLU, 1988.

LOUISIANA SYSTEMIC INITIATIVES PROGRAM 2012-13 PROFESSIONAL DEVELOPMENT PROJECTS CURRICULUM VITAE

| Name: Christine E. Gorton | | Current Position Title: Assistant Professor, Dept of Mathematics, Computer Science, and Statistics Project Position Title: | | |
|--|--------|--|-------------------------|--|
| INSTITUTION AND LOCATION | DEGREE | YEAR CONFERRED | FIELD OF STUDY | |
| Millsaps College Jackson, MS | B.S | 1997 | Computer Science | |
| McNeese State University Lake Charles, LA | M.S | 1999 | Mathematical Science | |
| Univ. of Louisiana at Lafayette Lafayette, LA | Ph.D. | 2006 | Mathematics | |

Teaching Experience:

Assistant Professor, McNeese State University, August 2006 – present. Courses included: Calculus I, Calculus II, Linear Algebra, Modern Algebra

Graduate Assistant, University of Louisiana at Lafayette, Aug. 2000 – May 2006. Responsible for lectures and exam evaluations. Courses included: Mathematics of Finance, Practical Mathematics, College Algebra, Pre-Calculus Trigonometry and Function Theory,

Applied Calculus Instructor, McNeese State University, May 1999 – August 2000 Courses included: College Algebra, Mathematics of Finance, Finite Math, Precalculus College Algebra

Publications:

Christine Gorton, "Generalizations of Primary Ideals," Proceedings of the Louisiana-Mississippi Section of the MAA, Spring 2004.

Christine Gorton and Henry Heatherly, "Generalized Primary Rings and Ideals," Mathematica Pannonica 17(2006), 17-28.

Presentations:

- "Patterns, Tilings, Sequences, and Identities," presented with K. Aucoin, LATM 2011 Conference, Oct. 2011.
- "Writing in a Precalculus Course," MAA Louisiana/Mississippi Sectional meeting, February 2011.
- "It's Great to Iterate: Stimulating Mathematical Inquiry Among Students of All Ages," presented with K.Aucoin, LATM 2009 Conference, October 2009.

Grants:

Co-Investigator, LEQSF grant, Audience Response System for Mathematics, Computer Science, and Statistics classes, 2011-2012

Co-Investigator, LaSIP Math and Science grant, 2009-2010

Distinctions:

Executive Committee Member, Louisiana/Mississippi Section of MAA, 2010-present

Section NExT Fellow, Louisiana/Mississippi section of MAA, 2008-2009

Co-Chair, Louisiana/Mississippi Sectional MAA Conference, March 2008

Louisiana Vice-Chair, Louisiana/Mississippi Section of the Mathematical Association of America, Spring 2007 – Fall 2007

Board of Regents Fellow Rhodes Outstanding Teaching Assistant Award

List all State and federal funding support for each IHE faculty member during the funding cycle. Duplicate this form for each IHE faculty member, and use additional sheets as necessary.

NAME OF FACULTY: Mr. Sid Bradly – No Current or Pending Support

| Status of Support: C | Current F | Pending S | Submission Planned in | n Near Fut | ure |
|---|----------------|-----------------|-----------------------|--------------|--------|
| Proposal Title (or Semester Teaching Support): | | | | | |
| Source of Support: | | | | | |
| Award Amount (or Monthly Teaching Rate): \$ Period Covered: | | | | | |
| Location of Activity: | | | | | |
| Person-Months or % of Effo | fort Committed | to the Project: | Cal Yr | AY | Summer |
| Status of Support: Co | Current | Pending | Submission Planned | in Near Fu | ture |
| Proposal Title(or Semester | er Teaching Su | pport): | | | |
| Source of Support: | | | | | |
| Award Amount (or Monthly | y Teaching Ra | te): \$ P | Period Covered: | | |
| Location of Activity: | | | | | |
| Person-Months or % of Effo | fort Committed | to the Project: | Cal Yr | AY | Summer |
| Status of Support: Cu | Current | Pending | Submission Planne | ed in Near I | Future |
| Proposal Title (or Semeste | er Teaching Sι | apport): | | | |
| Source of Support: | | | | | |
| Award Amount (or Monthly Teaching Rate): Period Covered | | | | | |
| Location of Activity: | | | | | |
| Person-Months or % of Effo | fort Committed | to the Project: | Cal Yr | AY | Summer |
| | | | | | |

List all State and federal funding support for each IHE faculty member during the funding cycle. Duplicate this form for each IHE faculty member, and use additional sheets as necessary.

NAME OF FACULTY: <u>Dr. George Mead Jr.</u>

Status of Support: X Current Pending Submission Planned in Near Future

Proposal Title (or Semester Teaching Support): McNeese State University LAMP Program

Source of Support: LA Board of Regents and NSF

Award Amount (or Monthly Teaching Rate): \$ 77,000 Period Covered: 9/1/2010 to 8/31/2015

Location of Activity: McNeese State University, Lake Charles, LA

Person-Months or % of Effort Committed to the Project: 3% Cal Yr AY Summer

Status of Support: X Current Pending Submission Planned in Near Future

Proposal Title(or Semester Teaching Support): Calcasieu Parish School Board Math & Science Partnership

Source of Support: Calcasieu Parish School Board

Award Amount (or Monthly Teaching Rate): \$ 12,600 Period Covered: 7/1/2011 to 5/31/2012

Location of Activity:

Person-Months or % of Effort Committed to the Project: Cal Yr AY Summer

Status of Support: Current Pending Submission Planned in Near Future

Proposal Title (or Semester Teaching Support):

Source of Support:

Award Amount (or Monthly Teaching Rate): Period Covered

Location of Activity:

Person-Months or % of Effort Committed to the Project: Cal Yr AY Summer

List all State and federal funding support for each IHE faculty member during the funding cycle. Duplicate this form for each IHE faculty member, and use additional sheets as necessary.

NAME OF FACULTY: <u>Dr. Karen Aucoin – No Current or Pending Support</u>

| Status of Support: | Current | Pending | Submission Plann | ed in Near Fu | uture | |
|---|----------------|-------------------|------------------|---------------|---|--|
| Proposal Title (or Seme | ester Teachinç | g Support): | | | | |
| Source of Support: | | | | | | |
| Award Amount (or Monthly Teaching Rate): \$ Period Covered: | | | | | | |
| Location of Activity: | | | | | | |
| Person-Months or % of | f Effort Commi | tted to the Proje | ect: Cal Yr | AY | Summer | |
| Status of Support: | Current | Pending | Submission Plan | ned in Near I | - - - - - - - - - | |
| Proposal Title(or Seme | ster Teaching | Support): | | | | |
| Source of Support: | | | | | | |
| Award Amount (or Mon | nthly Teaching | Rate): \$ | Period Covered: | | | |
| Location of Activity: | | | | | | |
| Person-Months or % of | f Effort Commi | tted to the Proje | ect: Cal Yr | AY | Summer | |
| Status of Support: | Current | Pending | Submission Pla | anned in Nea | r Future | |
| Proposal Title (or Semester Teaching Support): | | | | | | |
| Source of Support: | | | | | | |
| Award Amount (or Mon | nthly Teaching | Rate): | Period Covered | | | |
| Location of Activity: | | | | | | |
| Person-Months or % of | f Effort Commi | tted to the Proje | ect: Cal Yr | AY | Summer | |

List all State and federal funding support for each IHE faculty member during the funding cycle. Duplicate this form for each IHE faculty member, and use additional sheets as necessary.

NAME OF FACULTY: <u>Dr. Christine Gorton – No Current or Pending Support</u>

| Status of Support: Current Pending Submission Planned in Near Future | | | | |
|---|--|--|--|--|
| Proposal Title (or Semester Teaching Support): | | | | |
| Source of Support: | | | | |
| Award Amount (or Monthly Teaching Rate): \$ Period Covered: | | | | |
| Location of Activity: | | | | |
| Person-Months or % of Effort Committed to the Project: Cal Yr AY Summer | | | | |
| Status of Support: Current Pending Submission Planned in Near Future | | | | |
| Proposal Title(or Semester Teaching Support): | | | | |
| Source of Support: | | | | |
| Award Amount (or Monthly Teaching Rate): \$ Period Covered: | | | | |
| Location of Activity: | | | | |
| Person-Months or % of Effort Committed to the Project: Cal Yr AY Summer | | | | |
| Status of Support: Current Pending Submission Planned in Near Future | | | | |
| Proposal Title (or Semester Teaching Support): | | | | |
| Source of Support: | | | | |
| Award Amount (or Monthly Teaching Rate): Period Covered | | | | |
| Location of Activity: | | | | |
| Person-Months or % of Effort Committed to the Project: Cal Yr AY Summer | | | | |