

# **Greater Birmingham Mathematics Partnership**

## **Annual Report Year 1**

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## **Section 1. Activities and Findings**

### **A) Implementation**

An overview of the project's activities during its first year shows a focus on project startup and establishment. In addition to the demands on key personnel in the development and refinement of the Five-Year Strategic Plan, Annual Implementation Plan for Year 1, and Evaluation Plan, most project activities have been carried out or are on schedule for accomplishment as planned. A great deal of effort has been put into the formalization of the management structure and the institutionalization of the project at the partner organizations. The promotion of the project both within and outside the project partnership has been an area of concentration as well. Our project's progress in implementing its first year activities is provided in the matrix to follow. Narratives that detail our progress on each activity follow the matrix.

(Note on page numbering: Page following this is page 5. There is no page 4)

### Implementation Matrix

<b>Goal I:</b> To increase the effectiveness of middle school mathematics teachers within GBMP school system							
Activity	Actions	MSP Key Feature*:	Progress to date (check <u>one</u> )				
			Action scheduled for later in Year 1	Action carried out	Action delayed	Action revised	Action eliminated
1. MEC Summer Courses	a) Plan for summer courses	T, P, C		X			
	b) Promote summer courses to teachers through school systems			X			
	c) Start formal recruitment of teachers			X			
	d) Plan enrollment logistics and record management logistics			X			
	e) Select host site			X			
	f) Place teachers in courses; notify them of course dates			X			
	g) Place BSC and UAB faculty members in courses			X			
	h) Procure and deliver materials for courses to site		X				
	i) Teach four sections of <i>Patterns</i>		X				
	j) Begin MEC collaboration with UAB faculty			X			

<b>Goal I:</b> To increase the effectiveness of middle school mathematics teachers within GBMP school system							
Activity	Actions	MSP Key Feature*:	Progress to date (check <u>one</u> )				

		<b>Feature*:</b>	Action scheduled for later in Year 1	Action carried out	Action delayed	Action revised	Action eliminated
2. IHE Course Redesign and Development	a) Initiate dialogue between UAB mathematics and education faculty regarding revision of existing and development of new UAB mathematics courses	I, P, T, C		X			
	b) Continue to collaborate regarding new and revised courses			X			
	c) Organize new and revised courses into new track of the mathematics major (or natural science and mathematics major)		X				
	d) Prepare a document describing the proposed new track of the mathematics major (or natural science and mathematics major)		X				

**Goal I:** To increase the effectiveness of middle school mathematics teachers within GBMP school system

Activity	Actions	MSP Key Feature*:	Progress to date (check <u>one</u> )				
			Action scheduled for later in Year 1	Action carried out	Action delayed	Action revised	Action eliminated
3. Middle School Mathematics Certification	a) Initiate dialogue among UAB mathematics and education faculty members about Middle School Certification route	T, I		X			
	b) Continue to collaborate about Middle School Certification route			X			
	c) Prepare a document describing the proposed Middle School Certification				X		

**Goal I:** To increase the effectiveness of middle school mathematics teachers within GBMP school system

Activity	Actions	MSP Key Feature*:	Progress to date (check <u>one</u> )				
			Action scheduled for later in Year 1	Action carried out	Action delayed	Action revised	Action eliminated
4. Engineering Projects	a) Research: (1) Current mathematics curriculum requirements for middle school students in Alabama (2) Mathematics topics on state assessment tests (3) Current mathematics curricula used in GBMP school systems (4) Equipment available to mathematics teachers in GBMP school systems (5) Existing hands-on and mathematics application activities	P, C		X			
	b) Solicit input from teachers in summer courses regarding engineering projects		X				
	c) Begin identifying areas and formats for project design			X			
	d) Begin design of example projects for classroom use		X				

**Goal I:** To increase the effectiveness of middle school mathematics teachers within GBMP school system

Activity	Actions	MSP Key Feature*:	Progress to date (check <u>one</u> )				
			Action scheduled for later in Year 1	Action carried out	Action delayed	Action revised	Action eliminated
5. Recruitment of Pre-service Teachers	a) Share information about summer courses with pre-service teachers	T, I		X			
	b) Recruit minority pre-service teachers for summer courses			X			
	c) Award 10 pre-service teacher scholarships for summer courses			X			
	d) Place pre-service teachers in summer courses			X			
	e) Begin placement of pre-service teachers in MST classrooms					X	



**Goal II:** To increase the leadership capacity of middle school mathematics teachers within GBMP school

Activity	Actions	MSP Key Feature*:	Progress to date (check <u>one</u> )				
			Action scheduled for later in Year 1	Action carried out as planned	Action delayed	Action revised	Action eliminated
1. Mathematics Support Teams	a) Begin preparing for six days of MST follow-up sessions that will be held during the academic year following the 2005 summer courses	I, P, T		X			
	b) Select at least 18-30 teachers for the first cohort of Mathematics Support Team teachers (MST1's)		X				

**Goal III:** To unite the GBMP stakeholders (teachers, administrators, parents, IHE's and the public) in su  
programs that are high quality and effective.

Activity	Actions	MSP Key Feature*:	Progress to date (check <u>one</u> )				
			Action scheduled for later in Year 1	Action carried out as planned	Action delayed	Action revised	Action eliminated
1. Outreach Activities to Parents and the Community	a) Send update letter to businesses that supported the pilot phase of the project	P		X			
	b) Plan public sessions, select dates, and secure host sites			X			
	c) Publicize public sessions			X			
	d) Deliver public session #1 at four locations in January			X			
	e) Set dates for Year 2 public sessions			X			
	f) Make contact with AMSTEC for articulation of GBMP with statewide initiatives			X			
	g) Identify Community and Business Advisory Committee (CBAC) membership				X		
	h) Deliver public session #1 for CBAC and AMSTEC in summer 2005				X		

**Goal III:** To unite the GBMP stakeholders (teachers, administrators, parents, IHE's and the public) in su  
programs that are high quality and effective.

Activity	Actions	MSP Key Feature*:	Progress to date (check <u>one</u> )				
			Action scheduled for later in Year 1	Action carried out as planned	Action delayed	Action revised	Action eliminated
1. Outreach Activities to Parents and the Community  (continued)	i) Plan and hold first CBAC meeting and select CBAC chairperson				X		
	j) Forward NSF questions to CBAC chairperson				X		
	k) Design and launch website			X			

**Goal III:** To unite the GBMP stakeholders (teachers, administrators, parents, IHE's and the public) in successful programs that are high quality and effective.

Activity	Actions	MSP Key Feature*:	Progress to date (check <u>one</u> )				
			Action scheduled for later in Year 1	Action carried out	Action delayed	Action revised	Action eliminated
2. Sessions for Administrators	a) Plan for administrator sessions, select date and secure host site	P, I		X			
	b) Publicize administrator sessions			X			
	c) Deliver administrator session in January			X			

**Goal III:** To unite the GBMP stakeholders (teachers, administrators, parents, IHE's and the public) in su  
programs that are high quality and effective.

Activity	Actions	MSP Key Feature*:	Progress to date (check <u>one</u> )				
			Action scheduled for later in Year 1	Action carried out	Action delayed	Action revised	Action eliminat
3. Partnership-Driven Project Management	a) Project Management Team members communicate regularly	P		X			
	b) Hold four Project Management Team meetings			X			
	c) Hold three Project Design Team meetings		X				
	d) Hold three Partnership Steering Committee meetings					X	
	e) Hold two Community and Business Advisory Committee meetings				X		

**Goal III:** To unite the GBMP stakeholders (teachers, administrators, parents, IHE's and the public) in su programs that are high quality and effective.

Activity	Actions	MSP Key Feature*:	Progress to date (check <u>one</u> )				
			Action scheduled for later in Year 1	Action carried out	Action delayed	Action revised	Action eliminate
3. Partnership-Driven Project Management  (continued)	f) Hold annual National Advisory Board meeting				X		
	g) Hold two PI/PD meetings with BSC Provost to keep BSC administration informed of project issues and progress			X			
	h) Draft and submit the Five-Year Strategic Plan, Evaluation Plan, and Annual Implementation Plan for Year 1 with input from all partners by November15, 2004			X			
	i) Respond to NSF feedback on plans and revise and resubmit by April 28, 2005			X			
	j) Develop job descriptions for Fiscal Compliance Manager, Grants Administrator, advertise, interview and hire staff			X			

**Goal III:** To unite the GBMP stakeholders (teachers, administrators, parents, IHE's and the public) in su programs that are high quality and effective.

Activity	Actions	MSP Key Feature*:	Progress to date (check <u>one</u> )				
			Action scheduled for later in Year 1	Action carried out	Action delayed	Action revised	Action eliminate
3. Partnership-Driven Project Management  (continued)	k) Develop job description for Project Assistant, advertise, interview and hire				X		
	l) Publicize award through local, regional and academic media			X			
	m) Meet with school liaisons to summarize Steering Committee work and strengthen involvement			X			
	n) Begin using MSPnet and add members to site			X			
	o) Attend NSF meetings, conferences, and workshops			X			
	p) Establish department number and account at BSC and adapt administrative and financial systems as necessary to administer grant per NSF requirements			X			
	q) Develop subcontracts for subawards to MEC, UAB			X			
	r) Develop logo, letterhead				X		

**Goal III:** To unite the GBMP stakeholders (teachers, administrators, parents, IHE's and the public) in su programs that are high quality and effective.

Activity	Actions	MSP Key Feature*:	Progress to date (check <u>one</u> )				
			Action scheduled for later in Year 1	Action carried out	Action delayed	Action revised	Action eliminate
3. Partnership-Driven Project Management  (continued)	s) Secure laptop computer for Project Co-Director position			X			
	t) Receive formative evaluation and make changes to plans as necessary			X			
	u) Inform National Advisory Board of award and plan first meeting			X			
	v) Attend public session and discuss response to public sessions and administrator session			X			
	w) Subawardees (UAB and MEC) submit invoices and documentation to Grants Administrator; staff verify expenditures and process reimbursements			X			
	x) Prepare Annual Report			X			
	y) Discuss accomplishments and change plans as necessary			X			



**Goal IV:** To increase the mathematics achievement of all middle school students in GBMP schools and increase mathematics achievement data within these schools.

Activity	Actions	MSP Key Feature*:	Progress to date (check <u>one</u> )					
			Action scheduled for later in Year 1	Action carried out as planned	Action delayed	Action revised	Action eliminated	New Act
All of the above activities found under Goals I-III also contribute to Goal IV								

**\*Key to 5 Key Features:**

C = Challenging Courses and Curricula

E = Evidence-Based Design and Outcomes

I = Institutional Change and Sustainability

P = Partnership-Driven

T= Teacher Quality, Quantity and Diversity

**Note Regarding Assignment of MSP Five Key Features in Matrix:**

Since more than one of the MSP Key Features describe most of the project's activities, the letter representing the key feature deemed most descriptive is listed first followed by the others that are applicable.

## **Implementation Narrative**

### **Goal I, Activity 1: MEC Summer Courses**

As shown in the matrix, our project has either carried out, or is on schedule to carry out by the end of the project year, all of the actions assigned for this activity as planned.

Initial planning for summer courses began in October 2004, as MEC staff and course instructors met to gather input regarding revising and refining of summer courses. The GBMP Steering Committee met that same month and made recommendations for the dates of the summer courses, year-long follow-up, public sessions, recruitment of teachers for the summer courses, and involvement of parents and community leaders.

Following the Steering Committee meeting, Co-Project Directors Ann Dominick and Faye Clark met individually with administrators and district liaisons from targeted districts (Bessemer, Shelby County, Vestavia, Homewood, and Hoover) to promote the courses. Dominick and Clark gave a presentation about GBMP at the Bessemer Board of Education meeting in November 2004. In addition, Dominick and Clark met with the middle school teachers in Homewood, Shelby County, Vestavia and Fairfield to describe the GBMP, publicize the January 2005 public sessions, and to recruit teachers for the summer courses.

School district liaisons played an active role in the recruitment of teachers for the summer courses as well. They each used similar approaches, but tailored them to their own district's situation. District liaisons met with middle school mathematics department chairpersons, principals, and teachers individually to encourage participation. They sent brochures and registration information to teachers and held meetings to give information, answer questions, and encourage participation.

The site for the summer courses, Deer Valley Elementary, was identified very early in the project year. It was selected because it had successfully served as host site in the pilot phase of the project. The use of Deer Valley Elementary is provided by the Hoover City Schools at no cost to the project.

The enrollment and notification systems for the summer courses were developed by Co-PD Dominick and involved setting up a method for balancing each course section so it had a proportionate number of middle school, high school, and elementary teachers and IHE faculty. It also involved keeping up with requests for course slots as they were made. As teachers were being enrolled, when they or principals had individual questions that a district liaison could not answer, the Co-PD made a direct contact to address the questions.

Each enrolled teacher has received notification of acceptance, confirmed their participation, and has been provided logistical information about the summer course.

They have also been told about the availability of college credit for taking the summer courses and the procedures required to obtain credit.

Current enrollment includes 105 6th-8<sup>th</sup> grade teachers (including 7 special education teachers), 21 5<sup>th</sup> grade teachers, 18 high school teachers (23 more high school teachers are on a waiting list for participation next summer) 10 pre-service teachers, and 14 IHE faculty. We also have 47 K-4 teachers who are participating in courses supported by local funding. The response has been very encouraging, and we have had to increase from 4 to 6 sections offered to meet the demand for these courses.

Recruitment efforts have been highly successful in all districts with the exception of Vestavia Hills. The strongest support from Vestavia Hills since our pilot years has been from one of their primary schools whose administration is changing. The district liaison still hopes to garner more active support from the middle school, but this summer we have no middle school teachers coming from Vestavia Hills. However, all of the middle school teachers in the Fairfield School System are registered for summer courses and the other districts have good to exceptionally strong participation.

We attribute the success in recruitment efforts to several factors:

- The success of the pilot phase of the project and the reputation that MEC gained for outstanding professional development;
- The participation of district liaisons and administrators;
- The personal visits by the Co-Project Directors;
- The stipend and materials teachers will receive for participation; and
- The success of the public sessions in January, 2005.

Despite our recruitment successes, we have encountered some difficulties. First, engendering strong participation from all 8 school districts has proved a challenge. At this point, 6 of our partner districts have had exceptional to strong participation from middle school teachers. One district has had fair participation, and one has no middle school participation so far. This is due in part to some changes in school administration and buy-in from key players in districts. We will continue to work on strengthening participation in all the districts. We look forward to a successful summer and capitalizing on the momentum generated from participants as they complete courses.

A second, unforeseen recruitment challenge involved the desire of some schools and teachers to participate in the Alabama Math, Science, and Technology Initiative (AMSTI) training program, which involves two weeks of training in mathematics or science. Eighty percent of the faculty of the school is required to participate. We have found that teachers are not willing to take two weeks for AMSTI training and two weeks for GBMP content courses. To address this issue, we are working with AMSTI and hope that in the future, teachers who complete the GBMP courses will be counted as part of the required 80% AMSTI faculty participation.

In preparation for staging the courses, at the time of this report, MEC staff are procuring needed materials and arranging for delivery logistics. In addition to the regular attendant

course materials, the GBMP has also placed an order for 160 “teacher resource kits” composed of manipulatives to distribute to every grant-sponsored teacher participating in this summer’s round of *Patterns* courses.

In addition to the teachers, 14 IHE faculty members have been placed in the summer courses as expected through MEC sponsored scholarships. This number includes: 3 BSC mathematics professors (Bernadette Mullins, Doug Riley, Mary Jane Turner), 4 members of the UAB Mathematics Department (John Mayer, Donna Ware, Jim Ward, and graduate student Naomi Anderegg), 3 members of the UAB Engineering faculty (Dale Feldman, Linda Lucas, Anne McClain), and three members of the UAB Education faculty (Tommy Smith, Lee Meadows, Charles Calhoun), and a member of the UAB Center for Educational Accountability, the project’s evaluator. All members of the Design Team will participate in a MEC course during the life of the project except those who were already familiar with the MEC courses and approach and/or participated in a MEC course during the pilot phase of the project (Ann Dominick, Faye Clark, Eileen Moore, Mike Froning, Anne McClain, Ruth Parker, Patty Lofgren, Jerry Johnson, Millie Johnson). In March and April, MEC staff members Patty Lofgren and Ruth Parker collaborated with the Design Team to develop protocols for the IHE participation. As a result, a letter has been produced and is being sent to IHE faculty that provides guidelines for their participation.

The MEC course *Patterns, Functions, and Algebraic Reasoning* is scheduled to be taught 6 times this summer, 2 more times than originally planned due to demand and the desire to include K-4 teachers. Four sections are supported by grant funds and the 2 additional sections are being paid for through local fundraising. The course is scheduled on the following dates: June 7th—17th (Orientation June 6th), June 21st—July 1st (Orientation June 20th), July 12th—22nd (Orientation July 11th). (Multiple sections run concurrently for 2 of the 3 dates).

Finally, initial communications have begun between MEC staff Millie Johnson and UAB Mathematics faculty John Mayer. These conversations are centered on the development of the new series of MEC courses, beginning with the first new MEC course and parallel redesigned UAB course Math 105.

GBMP members also collaborated on the topic of assessing teacher learning. Specifically, the use of teacher portfolios in MEC content courses initiated discussion on assessment of teacher learning that has been valuable to the project. We expect that our continued use of portfolios and the development of rubrics have the potential to provide new knowledge to the field.

### **Goal I, Activity 2. IHE Course Redesign and Development**

Our project has carried out or is on schedule to carry out by year’s end, all of the actions listed in the matrix for this activity.

The aim of project actions for this activity has been to outline an academic major in mathematics that can be used as the content for a middle school certification in mathematics by the conclusion of the first project year. To that end, Drs. Froning, Smith, and Mayer at UAB, began on-going discussions in the Fall Semester (2004) to design a proposal for a track to be included in the mathematics major. This program must be carried out in consultation with the School of Education, which in the fall began drafting a Certification Checklist covering both the education and mathematics content of the proposed certification.

The development of the major track requires interface with MEC because of the use of their courses, the parallel IHE courses, and the pedagogical training for the teacher candidates. These discussions have also begun and involve giving UAB course credit for some of the MEC courses, having candidates participate in the summer courses along with in-service teachers, and having UAB faculty from Education, Engineering, and Mathematics take MEC courses in Summer Term, 2005, to inform their teaching in regular campus courses. MEC has provided scholarships for 14 IHE faculty members to participate in summer 2005 and UAB Education, Mathematics, and Engineering have been awarded 10 of them. Of the Mathematics Department, Drs. Mayer and Ward, Ms. Donna Ware, and mathematics graduate student Naomi Anderegg will take the MEC course *Patterns, Functions, and Algebraic Reasoning* in Summer Term.

In the fall, Mayer contributed to the development of the partnership strategic plan, and in particular, fleshed out the list of new and revised courses contemplated for the new mathematic major track pursuant to the aforementioned discussions. This projected course development outline became part of the Strategic Plan, though subject to revision through further discussions.

Late in the fall and into the spring semester it became apparent that the course (re)design process would be more involved than initially conceived. After some discussion, the partnership agreed to bring more mathematicians directly into the development, both to forward the design efforts more effectively, and to provide a basis for sustaining the projected institutional changes at UAB. This culminated in revisions to the Strategic Plan which augmented the UAB mathematics contingent by involving James Ward in a more substantial capacity in year one. Previously, he had been scheduled to participate in a MEC Summer course and provide feedback and guidance. Now, he will be directly involved in the design of the new major track, and, beginning in year two, will be responsible particularly for the design of the new calculus course sequence. In addition, three more UAB mathematicians are projected to contribute to the course design process in year two, and take a MEC course in summer, 2006: Yoshimi Saito, Yelena Kravchuk, and Walter Johnson.

The following actions are planned for the conclusion of year one, during the summer term at UAB:

1. Mayer, Ward, and Ware, working with faculty in Education and Engineering, will come to agreement on the content of a new middle school mathematics track in the mathematics major (or NSM-mathematics concentration major).

2. Mayer, Ward, and Ware, working with faculty in Education and Engineering, will identify and organize new and revised courses into a new track in the mathematics major (or NSM-mathematics concentration major), and prepare a document outlining the new major track for submission (in Fall, 2005) to the Mathematics Department, School of NSM, and Provost's Office for approval.
3. Mayer, Ward, and Ware, working with faculty in Education and Engineering, will identify and prioritize courses and topics suitable for supporting or motivating engineering projects.

The following Course Design Timetable has been developed. This breakdown is a draft and subject to further discussion.

**GBMP IHE Course Design Timetable**

UAB Course		Parallel MEC Course (if any)	(Re)Design Date (IHE)	Implement Date (IHE)
Number	Title			
MA 113	Mathematics for K-8 School Teachers 1	Patterns, Functions, and Algebraic Reasoning	Fall 2005	Spring 2006
MA 114	Mathematics for K-8 School Teachers 2	Geometry and Proportional Reasoning	Spring 2006	Summer 2006
MA 110	Finite Mathematics	Probability and Data Analysis Numerical Reasoning (some topics)	Summer 2006	Fall 2006
MA 105	Pre-Calculus Algebra	Numerical Reasoning (some topics) Extending Algebraic Thinking Using a Functional Point of View	Spring 2006	Fall 2006
MA 1**	Calculus and Functions with Applications 1		Summer 2006	Fall 2006
MA 1**	Calculus and Functions with Applications 2		Summer 2006	Spring 2007
MA 261 MA 419	Introduction to Mathematical Modeling		current	once year
MA 3**	Integrating Mathematics Ideas: Algebra, Geometry, Probability, and Statistics	Integrating Mathematics Ideas: Algebra, Geometry, Probability, and Statistics	Spring 2007	Fall 2007
MA 3**	Connecting Mathematics Content to Science and Technology	Connecting Mathematics Content to Science and Technology	Summer 2007	Spring 2008
MA 4**	Applications of Mathematics in Engineering, Technology, and the Sciences		Spring 2008	Fall 2008
MA 3**	Geometry 1		Summer 2007	Fall 2007
MA 4**	Geometry 2		Summer 2007	Spring 2008
MA 434	Algebra 1: Linear		current	twice year
MA 435	Algebra 2: Modern		current	once year
MA 485	Mathematical Probability		current	once year
MA 486	Mathematical Statistics		current	once year

### **Goal I, Activity 3. Middle School Mathematics Certification**

Our project has carried out 2 of the 3 actions listed in the matrix for this activity. The third has been delayed until year 2.

In year one, it has been our primary aim to initiate dialogue between IHE Education and Mathematics faculty to start the process that will lead to a new middle school mathematics certification. Over the course of the first project year, several conversations have been held among various configurations of education and mathematics faculty at UAB led by Drs. Froning and Mayer and it has been agreed that in order to accommodate a middle school certification, a companion track within the major in mathematics must also be developed. The development of a middle school mathematics certification in the Education Department and the development of a companion track in the Mathematics Department are two separate actions, since they are housed in different departments (as required by NCLB). The mathematics major will be developed in parallel with the certification. The certification is covered by state regulations while the mathematics major is covered by university academic rules.

While collaborations and dialogue have continued between departments throughout the year, further work describing a certification route cannot go forward until mid-summer. Since UAB does not now have a middle grades certification, the first step in obtaining approval for one is to seek permission to develop a proposal from the state Board of Education via a letter from the university president. Votes to give permission are taken only at the July meeting of the Board. The letter seeking permission has been sent. Once permission is received we will be able to plan the actual checklist of courses and experiences that will be submitted for approval in July 2006. Therefore, the certification proposal has been delayed until year 2 because of the requirement for receiving prior permission to develop it.

### **Goal I, Activity 4. Engineering Projects**

Our project has carried out, or is on target to carry out later in the project year, all of the actions listed in the matrix associated with this activity.

Much of the work done to date on this project activity has involved the collection of information by UAB Engineering faculty members including the current mathematics and science curriculum requirements for middle school students in Alabama. Investigating curricula and available equipment in GBMP School systems have begun, and faculty have also started the process of reviewing existing hands-on mathematics and science application activities.

To solicit teacher feedback, a working lunch has recently been integrated into the schedule of 3 sessions of the MEC summer courses each year beginning this June. This will allow the engineering faculty members working on the project opportunities to talk directly to teachers each year about what kinds of projects they think would be both



helpful and, more importantly, actually used. Starting in the second year, feedback will also come from the MST's during their leadership sessions as well as piloting the engineering projects.

Work to identify areas and formats for the design of engineering projects (EPs) has begun. It has become apparent that there are 3 types of EPs: 1) those designed to be used in the middle school classroom (MEPs), 2) those that provide the real world application of projects—summer EPs (SEPs), and 3) those to be used to teach the UAB classes—engineering experience projects (EEPs).

The approach for use in the middle school classroom (MEP) is to develop a variety of projects available in different formats with different levels of time commitment (i.e. demonstrations, labs, short homework problems, week-long projects, 6-week projects or 9-week projects) in concert with the feedback received from teachers during working lunches. Then these will be refined after MST's pilot the developed EPs on an on-going basis with further teacher feedback. One goal that has been identified is to develop sufficient EPs so that a middle school teacher could use at least one every 9-week session (or four per year) in each class selected from a series of 3 topic areas with multiple levels of time commitment. Therefore, 4 strands from each grade will have MEPs associated with them. For each strand there will be at least 3 applications. One will be related to the science curriculum at that grade level. For each application there will be MEPs developed at 5 levels of time commitment (demonstration, homework problem, 1 week project, 6 week project, and 9-week project). It is anticipated that the different levels of commitment can use the same application, but include more of the pedagogical concepts for challenging courses espoused in this project. It is also anticipated that some of the applications will be used multiple times to be built on both within a grade level as well as between grades. The teacher could use all three applications per strand for 12 EPs per year at any of the 5 levels of commitment.

For the summer engineering projects (SEPs) to be used in the middle school classroom, efforts will be made to provide applications for already developed projects. These SEPs will build on the type of projects used in current MEC courses. The additional part will be examples on how this information relates to applications and, if possible, subjects taught in each middle school grade level. These are to be viewed as short informational add-ons to the existing projects with little additional work for the teachers and students.

For the pre-service Mathematics classes at UAB, the approach will be to infuse engineering experience into the mathematics courses. In Year 2, engineering experience projects (EEPs) will be developed for Math 105 Pre-Calculus Algebra and the newly designed calculus courses. They will, thus, become an integral part of pre-service teacher preparation in the middle school mathematics major track. There will be both examples used in these classes to present concepts (EEPs) as well as an understanding of the developed projects (MEPs and SEPs) that could be used in their classroom. It is anticipated that some will be similar to the SEPs and can be used in middle school classes with explanations of the real world applications. Others will be like the MEPs and could be used directly in the middle school classroom. There also will be some EEPs that are

just for the specific course, but reinforce the pedagogical style for challenging courses that is the focus of this project.

Start-up work on the design of example projects for classroom use is scheduled for later this year. UAB Engineering faculty have determined that they will first design and present some sample EPs to the teachers they meet in this summer's MEC classes with a goal of showing examples of EPs with the 4 different levels of time commitment. Teacher feedback will guide their next steps in EP design as it will in successive project years. Teacher feedback is needed on what types of projects and level of commitment they would actually use in their classroom as well as what level and type of engineering support would they need to use the EPs.

### **Goal I, Activity 5. Recruitment of Pre-Service Teachers**

Our project has carried out 4 of the 5 actions listed in the matrix for this objective. The final activity involving the placement of pre-service teachers in MST classrooms was erroneously included in our Annual Implementation for Year 1 since MST's will not be selected until summer 2005 and will offer to serve as host teachers by the end of Year 3. It has been shown as "revised" for lack of a better label on the implementation matrix.

Project partners to date have had different results in the recruitment of pre-service teachers. To recruit pre-service teachers, departmental faculty at UAB notified all UAB undergraduate and 5th year students of the availability of the MEC summer courses by email and by personal appearances within classes during the spring 2005 semester. There was little response. UAB has two courses available in its regular catalog that are similar in spirit to the MEC summer courses, although not in delivery. It is thought that pre-service teachers may have confused the two kinds of courses. Recognizing this, UAB faculty will make sure the distinction is made clear to pre-service teachers in future recruitment efforts.

At Birmingham-Southern College (BSC), Eileen Moore approached 5 pre-service teachers and personally invited them to participate in the summer MEC *Patterns* course. Each one expressed surprise and pleasure. They were in the process of their elementary mathematics course that included Mathematical Power by Ruth Parker and had appreciated the documentation of a 5<sup>th</sup> grade teacher's year-long dialogue with Parker about transitioning from being teacher centered to being focused on how children were making sense of mathematical thinking. The pre-service teachers appreciated the opportunity to extend their mathematics content learning and pedagogy, the advantage of possible course credit, and the added benefits of a stipend and materials. They were also excited about the future placement for field experiences with teachers who had also been in the MEC courses, especially since they had already "interned" with a MEC "graduate" for a two-week field experience with one of the "Investigations" units.

Moore initially was allocated 5 of the 10 MEC scholarships and quickly enrolled 5 pre-service teachers, three African-American, one Hispanic, and one Caucasian. When recruitment efforts at UAB did not meet expectations, project leadership decided to

allocate the remaining scholarships to Moore as well. She needed only five phone calls to get more participants who expressed similar gratitude to be included. All five of these additional pre-service teachers are Caucasian, bringing the total breakdown of pre-service teachers for year 1 to 6 Caucasian, 3 African-American and 1 Hispanic. Another factor contributing to the success Moore has had in recruiting from BSC is that several pre-service teachers had the opportunity to see Ruth Parker speak at one of the four public sessions she made throughout the area in January. This further fueled their enthusiasm for the courses.

### **Goal II, Activity 1. Mathematics Support Teams**

As shown in the matrix, our project has carried out the first of the 2 actions assigned for this activity and is scheduled to complete the other later in the project year as planned.

The planning for the MST sessions has begun. Patty Lofgren and Ruth Parker of MEC have met several times to design the sessions so that they have a focus that is appropriate to the middle schools. MEC has also provided GBMP leadership with some recommendations and guidelines for the selection and participation of potential Mathematics Support Team (MST) members. During and immediately following the summer courses, MEC staff and course instructors will collaborate with Co-Project Directors and school district leaders in the identification of the first MST cohort. Actual meetings with MSTs won't happen until October 2005.

### **Goal III, Activity 1. Outreach Activities to Parents and the Community**

As shown in the matrix, our project has either carried out, or is on schedule to carry out by the end of the project year, all of the actions assigned for this activity as planned with the exception of those associated with the CBAC which have been delayed.

Funds were raised locally for the pilot phase of the project beginning spring, 2002, and annual letters have been sent to give funders an update on the progress of the project. Letters were sent out again in the spring of 2005 to announce the MSP award and to ask for additional monies to fund K-4 teacher participation in the MEC summer courses. And the project is pleased to report that 2 sections of the MEC *Patterns* course have been added this summer for these teachers supported largely by MEC scholarships and local contributions.

While the project garnered some local attention after the announcement of the award through various local media, targeted outreach to parents and the community took the form of public sessions led by project partner staff and staged in the community. Working with school district liaisons, Co-Project Directors Clark and Dominic identified and secured 4 sites throughout the greater Birmingham area to host the sessions that featured 2-hour presentations by Ruth Parker. The 4 public sessions occurred on successive evenings Jan. 10-13 at the following sites: Riverchase Middle School in

Shelby County which served Shelby County and Hoover; the Fairfield Civic Center which served Bessemer, Fairfield, and West Jefferson County; the Gardendale Baptist Church which served North and East Jefferson County; and a private residence in Mountain Brook which served Homewood, Vestavia, and Mountain Brook.

Numerous and varied recruitment tactics were used to promote the public sessions. Peggy Harrell, Jefferson County district liaison, arranged for TV and radio interviews for herself and Co-PD Dominick to advertise the public sessions. An announcement was placed in the area's major newspaper, The Birmingham News, and flyers were sent to the school districts to be sent home with the students. Co-PD Clark sent letters out to parents in Mountain Brook extending a personal invitation to attend a public session. As added inducement, a BBQ meal was provided for attendees and, at 3 of the 4 sites, bicycles (donated by project leadership) were given away by drawing.

Each of the 4 two-hour sessions was delivered by Ruth Parker who spoke about improving mathematics education and engaged the audience in doing mathematics. She emphasized the importance of teaching mathematics for understanding. The goals of the sessions were to raise community awareness and build community support for the project. A total of 378 people attended the January 2005 sessions and 90% of those completing post session evaluations rated the evening as informative or extremely informative. Our aim over the life of the project is to reach 1000 people through these sessions and our first year progress puts us well on our way to reaching that number. Parents are also provided the opportunity to participate in the summer courses through (a limited number of) MEC scholarships. One parent has taken advantage of this opportunity and registered for the *Patterns* course this summer.

The four actions for this activity labeled g-j in the implementation matrix that involve the Community and Business Advisory Committee have been delayed. GBMP is committed to having a broad representation of the community on this committee, and to date, Co-PD Clark has not been satisfied with the number of nominations received. This has delayed the formation of the CBAC and has also affected the other actions steps associated with it. The project fully intends, however, to have a CBAC in place by the end of the project year. Project leadership has decided that the first CBAC meeting should take place after the public session scheduled for CBAC and AMSTEC. That public session originally set for the summer had to be delayed due to the cancellation of an AMSTEC meeting. The first CBAC meeting has also been delayed as a result until fall 2005.

The final action the project has taken to reach out to the community in this first year has been the development of a GBMP website. The decision was made early in the project year that it was more appropriate to have BSC provide website development and hosting rather than MEC (as originally planned) since BSC is the lead project partner. The project's grants administrator, PI Mullins, and BSC's web development staff collaborated to design the site and the launch occurred in May. The site initially consists of six pages and represents only our initial efforts. We expect to expand it in Year 2 to provide a constant source of real time information for all those interested. The GBMP website home page can be found at <http://www.bsc.edu/gbmp>.

### **Goal III, Activity 2. Sessions for Administrators**

As shown in the matrix, our project has carried out all of the actions assigned for this activity as planned.

Plans were made in the fall of 2004 for the first administrator session to be held in January, 2005. District Liaisons and Co-Project Directors met with school administrators to publicize the first session and ask for their commitment to attend sessions throughout the project.

On January 12<sup>th</sup>, the first half-day administrator session was held at BSC. Twenty-four local school principals and administrators attended from 10 of the 23 participating middle schools. MEC staff, led by Ruth Parker, delivered the session which served several purposes, giving administrators:

- An overview of the GBMP and information about where their school fit into the whole project;
- An opportunity to do mathematics themselves and experience what it is like to be a learner;
- The experience of being in the learner's seat and thus a chance to get a taste of what teachers would be learning in the summer courses and a better appreciation for the changes teachers have to face in adjusting their teaching; and
- An opportunity to ask questions and give feedback about the public sessions given in their communities to their parents, teachers, and fellow administrators.

The session also began the process of building a community around the common goal of improving mathematics education in the Greater Birmingham area.

At the session's conclusion, administrators completed evaluations on which one participant described the experience as "very powerful". Another wrote "Each segment of the meetings helps me gain the knowledge necessary to support my teachers as they approach the summer courses." Three administrators have also signed up to participate in the MEC summer courses themselves.

### **Goal III, Activity 3. Partnership-Driven Project Management**

As shown in the matrix, our project has carried out the majority of the actions assigned for this activity as planned. Some of the project's work with the CBAC and NAB has been delayed as has been the development of a project logo and letterhead. Hiring a project assistant was also delayed although it will be accomplished in early June.

As they managed the project over the course of the first year, the Co-Project Directors and PI communicated frequently by email and phone and met in person whenever needed. The Project Management Team communicated by email throughout the year and

members of the Management Team met in person on the following dates (with Ruth Parker participating via speaker phone when not in Birmingham): October 25-27 (two-and-a-half day meeting held in conjunction with the Design Team), January 4 and 13 (in conjunction with the Design Team), March 30, April 3, 5, and 21. The Project Design Team also communicated by email and met in person on October 25-27 and January 13. A third Design Team meeting will be held in the summer. The Partnership Steering Committee met in person on October 27 and January 12. The Co-Project Directors and PI met with the BSC Provost on October 5 and March 18 and the PI also communicated with and met with the Provost on other occasions. The Provost continually expressed interest in and support for GBMP. The Co-Project Directors and PI have also met twice with leadership of Alabama Mathematics, Science, and Technology Education Coalition (AMSTEC). The Evaluation Team attended meetings when appropriate and requested. Minutes for all meetings are kept and posted to MSPnet along with strategic plans, other relevant files, and a calendar of events.

The National Advisory Board has been formed and the first annual meeting has been set for September 15-16, 2005 in order to accommodate the schedules of the members. The Community and Business Advisory Board membership will be finalized in the summer. The first CBAC meeting will be held in the fall following a public session scheduled to accommodate members of the Alabama Mathematics, Science, and Technology Education Coalition (AMSTEC).

A team of four GBMP members attended the NSF Financial Management and Oversight Meeting and found it valuable. A team of five attended the MSP Learning Network Conference where we made contact with the Auburn University MSP, a connection we intent to maintain. A team member and the evaluator attended the MSP Evaluation Workshop and learned about the Survey of Enacted Curriculum that we will use in our project. And a team member attended the MSP Workshop on Challenging Courses and Curricula and sent back suggestions that assisted the Management Team in developing a GBMP definition of CCC. In addition, Ruth Parker made a presentation entitled *Quality Mathematics Programs for All: What Parents Need to Know* at the national NCSM conference and a presentation entitled *Algebra for All: What Parents Need to Know* at the national NCTM conference in April. Parker shared the design of the Greater Birmingham Mathematics Partnership work within the context of disseminating lessons learned from MEC's current work with community engagement. The importance of the active engagement of university level mathematicians, engineers, and education faculty members was emphasized.

The atmosphere in all meetings was positive and productive. GBMP members work together extraordinarily well. Discussions are frank and team members are neither easily offended nor easily discouraged. The level of engagement, dedication and time commitment of the Management Team is noteworthy. Each member, without exception, contributed to the intensive process of collaborative strategic plan development and revision, discussing the successes and challenges of the first year, writing the Annual Report, discussing changes that would enhance our work, and writing the Annual Implementation Plan for Year 2.

The District Liaisons provided critical assistance in preparing for the summer courses, public sessions, and administrator sessions and in discussing the selection of MST's and CBAC members. District liaisons also worked to gain media coverage of GBMP through television, radio, newspaper, and school newsletters. District Liaisons hosted and publicized the public sessions and requested the assistance of some Parent Teacher Associations. The efforts of the District Liaisons have been appreciated. In order to increase communication in all directions and more fully utilize the expertise of the District Liaisons, project leadership has decided to increase the number of Partnership Steering Committee meetings to four in future years. Co-Project Director Ann Dominick will also communicate with the district liaisons prior to and following each of these meetings. In addition, in order to more fully involve the school districts in the decision-making process of the partnership, three additional school district representatives have been added to the Management Team.

The Co-Project Directors have decided to report to both the Project Design Team and the Partnership Steering Committee about the overall progress of the GBMP on a (roughly) quarterly basis during meetings scheduled for October, January, March and August (in addition to the annual report in June). A written report will be attached to the minutes of the meeting.

The Co-Project Directors and PI have clarified their division of labor. In addition to the responsibilities described in the Five-Year Strategic Plan, the Co-Project Directors and PI are responsible for the following:

The PI is responsible for:

- Overseeing the efforts of the PDs and Project Management Team
- Serving as the primary contact for the BSC administration and the NSF

Co-Project Director Faye Clark is responsible for:

- Serving as primary project director for the following project activities:
  1. Outreach activities to parents and the community (including website and MSPnet)
  2. IHE course redesign and development
  3. Middle school mathematics certification
  4. Engineering projects
- Serving as primary project director for the following groups:
  1. Project Management Team
  2. Project Design Team
  3. National Advisory Board
  4. Community and Business Advisory Committee
- Serving as primary contact for articulation with the Alabama Mathematics, Science, and Technology Education Coalition (AMSTEC)
- Handling public relations with the community
- Seeking appropriate media opportunities for GBMP

Co-Project Director Ann Dominick is responsible for:

- Serving as primary project director for the following project activities:
  1. MEC summer courses
  2. Mathematics support teams
  3. Sessions for administrators
  4. Recruitment of pre-service teachers
- Serving as primary project director for the Partnership Steering Committee
- Serving as primary contact for articulation with the Mobile Mathematics Initiative (MMI) and the Alabama Mathematics, Science, and Technology Initiative (AMSTI)
- Handling public relations with the school systems

Throughout the year, the fiscal and compliance aspects of the GBMP were handled well by the Grants Administrator, Lawrence Moose, and the Fiscal Compliance Manager, Erin Thomas. The hiring of a Project Assistant for GBMP was delayed in Year 1. However, we have identified a candidate to provide full-time assistance during the summer (an undergraduate who is a rising senior education major and has demonstrated excellence in other work settings). We will work to find a permanent assistant.

It is also noteworthy that communication between the Management Team and the Evaluation Team has been outstanding. At the onset of the project, we noted two reasons why such communication is important. First, while the evaluation plan does not drive the implementation plan, it certainly can inform the implementation plan and vice versa. Secondly, an important endeavor of the evaluators is to develop not only summative assessment, but also formative assessment. It is critical that this information flows easily to the Management Team and then to the entire partnership so that it is possible to modify implementation based on what has been learned.

Throughout plan development, the Management Team attended to research and evaluation needs. The Evaluation Team provided valuable information and insight to assist the Management Team on numerous topics including the following: objective pre-test and post-test for the *Patterns* course; developing a project-wide rubric for scoring performance assessments; having teams of teachers attend the courses together to provide a critical mass of colleagues; MST selection; the GBMP definition of challenging courses and curricula; and the planned orientation sessions.

**Goal IV: To increase the mathematics achievement of all middle school students in GBMP schools and reduce discrepancies in disaggregated mathematics achievement data within these schools.**

As the ultimate aim of the partnership, progress on all previous project actions, activities, and goals contributes to reaching this goal.



## **B) Outcomes and Benchmarks**

All outcomes and benchmarks for the five-year project are listed in the following Goals Matrix. The Project Management Team has decided to eliminate Outcome I-G and I-H. We note that benchmarks for recruitment, diversity, and retention for pre-service teacher candidates and graduates are included in Outcome I-C.

The Goals Matrix is organized according to the four GBMP goals identified in the Five-Year Strategic Plan. For each goal, all anticipated outcomes (objectives) and associated benchmarks are listed in the matrix (these were identified in the Evaluation Plan that was submitted with the Five-Year Strategic Plan). The MSP Key Features are given for each outcome. A narrative describing the most significant benchmarks attained along with information about benchmarks that were not attained follows the matrix.

## Goals Matrix

Goal I: To increase the effectiveness of middle school mathematics teachers within GBMP school system							
Outcome	Measure	Benchmark	Feature	Level of Attainment (check)			
				On target to reach benchmark later as scheduled	Benchmark met	Benchmark not met	Target year has been revised
Increase teachers' knowledge and understanding of mathematics (Outcome I-A)	MEC courses	By the end of Year 1, 90 grade 6-8 teachers will have completed one course	TC	X			
		By the end of Year 2, 180 grade 6-8 teachers will have completed one course					
		By the end of Year 2, 66 grade 6-8 teachers will have completed two courses					
		By the end of Year 3, 225 grade 6-8 teachers will have completed one course					
		By the end of Year 3, 132 grade 6-8 teachers will have completed two courses					
		By the end of Year 4, 274* grade 6-8 teachers will have completed one course (*unless population declines)					
		By the end of Year 4, 198 grade 6-8 teachers will have completed two courses					
		By the end of Year 5, 274* grade 6-8 teachers will have completed two courses (*unless population declines)					
		By the end of Year 5, slots will have been provided for an average of three courses per grade 6-8 teacher					
		By the end of Year 5, 100 grade 5 teachers will have completed at least one course		X			
		By the end of Year 5, at least 20 grade 9-12 teachers will have completed at least one course		X			
		By the end of Year 5, at least 50 pre-service teachers will have completed at least one course		X			

Outcome	M e a s u r e	Benchmark	F e a t u r e	Level of Attainment (che			
				On target to reach benchmark later as scheduled	Benchmark met	Benchmark not met	Target year has been revised
Increase teachers' knowledge and understanding of mathematics (continued)	C K M T	80% of participating teachers master 75% or more of the material presented at posttest in each course					
		90% of participating teachers will demonstrate gains of one level or more on one or more of the rubric dimensions during their first MEC course					
		80% of participating teachers will score at Level 4 (proficient) or higher on all dimensions at posttest					
		For all courses after the first, at least 33% of teachers will score above Level 4 on at least one dimension					
	P o r t f o l i o	After one course, 75% of teachers present evidence of multiple high-quality performance assessments that have been rigorously and appropriately scored (thereby demonstrating understanding of the mathematics proficiencies)					
		After two or more courses, 90% of teachers present such evidence					

Outcome	Measure	Benchmark	Feature	Level of Attainment (check)			
				On target to reach benchmark later as scheduled	Benchmark met	Benchmark not met	Target year has been revised
Improve classroom instructional practices (Outcome I-B)	S E C	Among GBMP participants, a 10% improvement in curriculum and pedagogical ratings in the year after initial training	T C				
		An additional 5% improvement for each year that the teacher takes a subsequent course					
		GBMP participants will show greater improvement than the comparison group					
	R T O P	Among GBMP participants, mean ratings of key areas will increase by 10% in the year after initial training					
		An additional 5% improvement for each year that the teacher takes a subsequent course					
		GBMP participants will show greater gains than the comparison group					
	S u r v e y	Evidence of both initial satisfaction with training and improved self-reports of understanding and practice					

Outcome	Measure	Benchmark	Frequency	Level of Attainment (check)			
				On target to reach benchmark later as scheduled	Benchmark met	Benchmark not met	Target year has been revised
Recruit and retain a diverse pool of candidates to middle school mathematics education (Outcome I-C)	Data	During Year 1, at least 10 scholarships will be awarded to pre-service teachers to attend MEC courses	T C	X			
		During Year 2, at least 10 scholarships will be awarded to pre-service teachers to attend MEC courses					
		During Year 3, at least 10 scholarships will be awarded to pre-service teachers to attend MEC courses					
		During Year 4, at least 10 scholarships will be awarded to pre-service teachers to attend MEC courses					
		By the end of Year 5, a total of 50 scholarships will have been awarded to pre-service teachers					
	Data	By the end of Year 2, at least 8 minority pre-service teachers will have completed at least one GBMP course		X			
		By the end of Year 4, at least 12 additional (total of 20) minority pre-service teachers have completed at least one GBMP course					
		By the end of Year 5, at least 10 additional (total of 30) minority pre-service teachers have completed at least one GBMP course					
		By the end of Year 5, at least 30 minority pre-service teachers will have graduated (under the current certification) having completed at least one GBMP course					
	Data	In Year 3, 5 students will be admitted to the new UAB middle school mathematics certification program					
		In Year 4 and Year 5, 5-10 students will be admitted to the program					
		30% of applications will be from minority groups					
		3 or more of the admitted students will be minority students					
		90% retention of students admitted to the teacher education program for the new middle school mathematics certification					

Outcome	Measure	Benchmark	Feature	Level of Attainment (check)			
				On target to reach benchmark later as scheduled	Benchmark met	Benchmark not met	Target year has been revised
Pre-service teachers will demonstrate content knowledge and pedagogical skills consistent with standards and best practices (Outcome I-D)	Portfolio	90% of candidates will yield rubric-based scoring at the “emerging proficient” level prior to student teaching on all domains	T				
		90% of candidates will yield rubric-based scoring at the “initial proficient” level at the end of student teaching on all domains					
Revise IHE courses and mentoring systems (Outcome I-E)	Evidence	Evidence of inclusion of MEC content and best teaching and assessment practices and include engineering activities developed (evidence gathered via syllabi, focus groups, RTOP)	IPT				
		All necessary courses are designed (syllabi are developed) according to timeline					
		Mathematics and mathematics education curricula are approved by UAB and state according to timelines					
Place new teacher interns in best-practice settings (Outcome I-F)	Placement	The percentage of students placed in grade 6-8 best-practice settings will increase by at least 10% each year in each IHE	T				
		The percentage of students placed in grade 6-8 best-practice settings will be 100% in each IHE by Year 5					

**Goal II: To increase the leadership capacity of middle school mathematics teachers within GBMP s**

Outcome	M e a s u r e	Benchmark	F e a t u r e	Level of Attainment (che			
				On target to reach benchmark later as scheduled	Benchmark met	Benchmark not met	Target year has been revised
MST's provide technical support to colleagues, provide model demonstration classrooms, mentor new teachers, and work with IHE faculty to improve teacher education (Outcome II-A)	D a t a	By the end of Year 1, at least 18-30 grade 5-8 teachers will have been identified as MST1's (first cohort)	I P T				
		By the end of Year 3, at least 20-30 grade 5-8 teachers will have been identified as MST2's (second cohort)					
	L o g	By the end of Year 2, all eligible MST1's will have completed their first year of follow-up					
		By the end of Year 3, all eligible MST1's will have completed their second year of follow-up					
		By the end of Year 3, 75% of eligible MST1's will offer to serve as host teachers for pre-service teachers					
		By the end of Year 3, engineering projects will be included as follow-ups for MST1's who pilot projects					
		By the end of Year 4, all eligible MST1's will have completed their third year of follow-up					
		By the end of Year 4, at least 75% of MST1's will provide support and technical assistance to colleagues					
		By the end of Year 4, all eligible MST2's will have completed their first year of follow-up					
		By the end of Year 5, 50% of MST1's will facilitate sessions with parents					
		By the end of Year 5, all eligible MST1's will have completed their fourth year of follow-up					
		By the end of Year 5, 75% of MST2's will offer to serve as host teachers for pre-service teachers					
		By the end of Year 5, all eligible MST2's will have completed their second year of follow-up					

Outcome	Measure	Benchmark	Feature	Level of Attainment (check)			
				On target to reach benchmark later as scheduled	Benchmark met	Benchmark not met	Target year has been revised
Improved content and pedagogical knowledge by non-MST teachers attributable to mentoring or technical assistance by the MST's (Outcome II-B)	Survey	Protégés, colleagues, and teacher candidates report specific content and pedagogical improvements attributable to interactions with the MST	T				
		Specific beneficial MST behaviors are identified					
	SE C	Protégés will report changes in the nature of curriculum and teaching practices in a manner consistent with program expectation					

**Goal III: To unite the GBMP stakeholders (teachers, administrators, parents, IHE's and the public programs that are high quality and effective.**

Outcome	Measure	Benchmark	Feature	Level of Attainment (check)			
				On target to reach benchmark later as scheduled	Benchmark met	Benchmark not met	Target year has been revised



Increase the stakeholders' knowledge of mathematics education reform (Outcome III-A)	F o c u s / L o g	Evidence of knowledge of the need for mathematics education reform, project efforts to improve mathematics teaching and learning, and evidence of support to schools who are making such reform efforts	P				
	D a t a	By the end of year five, the total attendance at public sessions will have been at least 1000	I	X			
		Evidence of attendance at 3 or more sessions					
		Over 85% of survey respondents will have rated the sessions as 'informative' or 'extremely informative'		X			
Expand administrators' knowledge of and ability to support effective mathematics instruction (Outcome III-B)	D a t a	By the end of Year 2, school administrators from 30% of participating grade 6-8 schools will have participated in the public sessions and administrator sessions	I P	X			
		By the end of Year 5, school administrators from 90% of participating grade 6-8 schools will have participated in the public sessions and administrator sessions					
	I n t e r v i e w / S u r v e y	Evidence of administrator leadership in promoting mathematics understanding and mathematics education as a school/community priority					

Outcome	Measure	Benchmark	Feature	Level of Attainment (check)			
				On target to reach benchmark later as scheduled	Benchmark met	Benchmark not met	Target year has been revised
Improve communication between K-12 school systems and IHE's (Outcome III-C)	Focus / Survey	Evidence that obstacles to successful communication are identified and solutions are jointly identified and implemented	IPT				
Support parents in their abilities to both understand and help their children as learners of mathematics (Outcome III-D)	Survey	Evidence of increased understanding of math, evidence of increased parent involvement in math education of children	I				
Form and nurture strong business and education partnerships in support of mathematics education (Outcome III-E)	Records	Evidence of expansion of number and nature of business involvements in GBMP efforts to publicize mathematics education reform and support reform efforts within the schools/IHE's	IP				

**Goal IV: To increase the mathematics achievement of all middle school students in GBMP schools disaggregated mathematics achievement data within these schools.**

Outcome	Measure	Benchmark	Feature	Level of Attainment (check)			
				On target to reach benchmark later as scheduled	Benchmark met	Benchmark not met	Target year has been revised
Increase standardized mathematics achievement performance of middle school students in participating schools (Outcome IV-A)	ARM T	The percentage of students in each disaggregated subgroup performing at proficient levels will increase within each school (that meets the inclusion criteria) by at least 5% per year during Year 2 in grade 6 math	E C				
		The percentage of students in each disaggregated subgroup performing at proficient levels will increase within each school (that meets the inclusion criteria) by at least 5% per year during Year 3 in grade 5-8 math					
		The percentage of students in each disaggregated subgroup performing at proficient levels will increase within each school (that meets the inclusion criteria) by at least 5% per year during Year 4 in grade 5-8 math					
		The percentage of students in each disaggregated subgroup performing at proficient levels will increase within each school (that meets the inclusion criteria) by at least 5% per year during Year 5 in grade 5-8 math					
		By the end of year five, we anticipate that the achievement gap between the underrepresented African American, American Indian and Hispanic students and the high achieving students at all participating schools will be cut by one third					
		Students in comparison schools will yield significantly lower gains within subgroups					
	S A T	Improvements in average normal curve equivalent scores on math subscales					

Outcome	M e a s u r e	Benchmark	F e a t u r e	Level of Attainment (che			
				On target to reach benchmark later as scheduled	Benchmark met	Benchmark not met	Target year has been revised
Increase middle school students' abilities to solve mathematical problems and communicate their solutions in multiple ways (Outcome IV-B)	B a l a n c e d  A s s e s s m e n t  P r o g r a m	Rubric-based scores improve across time.	E C				
		At least 75% of students within each classroom perform at criterion-levels by the end of each year					

Outcome	Measure	Benchmark	Feature	Level of Attainment (check)			
				On target to reach benchmark later as scheduled	Benchmark met	Benchmark not met	Target year has been revised
Increase middle school students' access to and participation in challenging courses and curricula (Outcome IV-C)	Academic	Within one year of completing the first MEC course, at least 85% of participants will meet some of the criteria for challenging courses and curricula (CCC) in their teaching practice and at least 10% of participants will meet most of the criteria for CCC in their teaching practice	C				
		Within one year of completing a second course, at least 90% of participants will meet some CCC criteria for and at least 50% of participants will meet most CCC criteria					
		Within one year of completing a third course, at least 95% of participants will meet some CCC criteria and at least 75% of participants will meet most CCC criteria					
		For each additional course completed beyond three, an additional 5% of participants will meet most of the CCC criteria					
	Participatory	By the end of year 2, 25% of grade 6-8 students will be participating in courses that meet some of the criteria for CCC and 5% of grade 6-8 students will be participating in courses that meet most of the criteria for CCC					
		By the end of year 3, 50% of grade 6-8 students will be participating in courses that meet some criteria and 15% will be participating in courses that meet most criteria					
		By the end of year 4, 75% of grade 6-8 students will be participating in courses that meet some criteria and 30% will be participating in courses that meet most criteria					
		By the end of year 5, 90% of grade 6-8 students will be participating in courses that meet some criteria and 50% will be participating in courses that meet most criteria					

#### Key to 5 Key Features:

C = Challenging Courses and Curricula

E = Evidence-Based Design and Outcomes

I = Institutional Change and Sustainability

P = Partnership-Driven

T= Teacher Quality, Quantity and Diversity

**Note Regarding Assignment of MSP Five Key Features in Matrix:**

Since more than one of the MSP Key Features describe most of the project's outcomes, in the "Feature" column for each outcome in the matrix, the letter representing the key feature deemed most descriptive is listed first followed by the others that are applicable.

**Note Regarding Convention Used to Assess Level of Attainment:**

Throughout the matrix, generally, only benchmarks that describe Year 1 progress are assessed with an "X" although we recognize that progress made in Year 1 certainly has a direct effect on the project's ability to attain benchmarks set for Years 2-5. In instances where benchmarks are stated in terms of only Year 5 targets, and for which no intermediate or yearly targets exist, a level of attainment has been checked (X). We have used this approach in an attempt to provide as clear a snapshot of our first year progress as possible in the context of a complete listing of our project's outcomes (over five years and consistent with the evaluation plan)

## **Goals Narrative**

### **Goal I: To increase the effectiveness of middle school mathematics teachers within GBMP school systems**

Since the GBMP project is in its early stages (the first MEC courses will be offered in summer 2005 after the Annual Report is submitted), only three outcomes related to this goal are currently relevant.

#### **Increase teachers' knowledge and understanding of mathematics**

The relevant benchmarks at this time are for MEC course enrollment. Both benchmarks for Year 1 have been met. Namely, at least 90 grade 6-8 teachers and at least 10 pre-service teachers are currently enrolled. We have five-year benchmarks for grade 5 teachers (100 served by Year 5) and grade 9-12 teachers (20 served by Year 5). At this time, 18 grade 9-12 teachers and 21 grade 5 teachers are enrolled. For high school teachers, this is well ahead of schedule to meet the five-year goal and for grade 5 teachers this is slightly ahead of schedule to meet the five-year goal, but we anticipate that both of these benchmarks will be reached in Year 5.

#### **Recruit and retain a diverse pool of candidates to middle school mathematics education**

The benchmark of awarding 10 pre-service teacher scholarships in Year 1 has been met. Regarding minority teachers, the five-year benchmark is that, by the end of Year 5, at least 30 minority pre-service teachers will have graduated (under the current certification) having completed at least one GBMP course. The intermediate benchmark is that, by the end of Year 2, at least 8 minority pre-service teachers will have completed at least one GBMP course. We are on track to meet this benchmark since 4 minority pre-service teachers are currently enrolled in a MEC course for summer 2005.

### **Goal II: To increase the leadership capacity of middle school mathematics teachers within GBMP school systems**

The first cohort of MST's will be selected in summer 2005.

**Goal III: To unite the GBMP stakeholders (teachers, administrators, parents, IHE's and the public) in support of mathematics education programs that are high quality and effective**

**Increase the stakeholders' knowledge of mathematics education reform**

GBMP is on track to meet the benchmark that, by the end of year five, the total attendance at public sessions will have been at least 1000, since Year 1 attendance was 378. We have exceeded the benchmark that over 85% of respondents will have rated the sessions as 'informative' or 'extremely informative' since 90% of respondents rated the public sessions as such.

**Expand administrators' knowledge of and ability to support effective mathematics instruction**

The relevant benchmark is that, by the end of Year 2, school administrators from 30% of participating grade 6-8 schools will have participated in the public sessions and administrator sessions. The benchmark has been met since administrators from 10 of the 23 GBMP grade 8 schools (43%) participated in Year 1. A total of 24 administrators were in attendance representing the following districts and schools (the grade 6-8 schools are in italics).

Districts

Bessemer City

Fairfield City

Homewood City

Hoover City

Jefferson County

Mountain Brook City

Shelby County

Schools

Central Office

Central Office

Hall Kent Elementary

*Homewood Middle School* (2 participants)

Central Office

Central Office

*Bagley Junior High*

*Bottenfield Middle School*

*Bragg Middle School*

*Brighton Middle School*

*Clay Chalkville Middle School*

Ervin High School

Fultondale Elementary School

Fultondale High School

*Mountain Brook Junior High* (2 participants)

Central Office (3 participants)

*Chelsea Middle School*

*Columbiana Middle School*

*Riverchase Middle School*

Thompson High School

We are also on track to reach the five-year benchmark that school administrators from 90% of participating grade 6-8 schools will have participated in the public sessions and administrator sessions.



**Goal IV: To increase the mathematics achievement of all middle school students in GBMP schools and reduce discrepancies in disaggregated mathematics achievement data within these schools**

The 2004-2005 school year will serve to provide baseline data.

**C) Data Analysis**

Although not much quantitative data is available this early in the project, GBMP is pleased with the results to date. Registration for summer courses and participation in administrator sessions has met our expectations and the responses to the public sessions exceeded our expectations both in terms of attendance and survey ratings.

**D) Annual Highlights**

**Major Accomplishments**

- 1) The Greater Birmingham Mathematics Partnership started as a grass roots effort on the part of teachers who recognized a need for more mathematics content knowledge and pedagogy for teaching for understanding. The pilot phase of the project included mostly elementary teachers with several middle school teachers and a few high school teachers. Now the enrollment includes 105 6th-8<sup>th</sup> grade teachers (including 7 special education teachers), 21 5<sup>th</sup> grade teachers, 18 high school teachers (23 more high school teachers are on a waiting list for participation next summer) 10 pre-service teachers, and 14 IHE faculty. We also have 47 K-4 teachers who are participating in courses supported by local funding. The response has been very encouraging, and we have had to increase from 4 to 6 sections offered to meet the demand for these courses. The partnership has had strong participation in the pilot phase, but now the cooperative agreement has allowed the full participation of the more underprivileged school districts, and we are proud of the diverse populations being reached through this work.
- 2) The Partnership has proven to be made up of people who keep the broad goals of the project in mind and are not interested in "guarding their own turf." In particular, since we have two IHEs involved and five different schools/divisions within those IHEs, we are extremely proud of the way the partnership has worked together to make our first year a success.

- 3) The response of different stakeholders in the communities served by the partnership has been exceptional.
  - Almost 400 attended the four public sessions offered in January. The audiences were made up of teachers, administrators (from superintendents and UAB provost to principals and IHE faculty), parents, and business and community leaders.
  - We had strong attendance at our first session for administrators.
  - We have met and in some cases exceeded registration goals for this summer.
  - Local community and business support has been outstanding. Businesses, individuals, and the Community Foundation have provided funding for K-4 teachers to attend summer courses.
- 4) Work that has begun (in mathematics, education, and engineering) toward a new middle school certification has the potential to significantly impact teacher preparation in the state.
- 5) Formation of an outstanding National Advisory Board is an accomplishment we are proud of in our first year. Every board member has excellent credentials and has made valuable contributions on their own and will add valuable input to this project. We look forward to a productive meeting this fall.

## **Challenges**

- 1) Getting strong participation from all eight school districts has been a challenge. At this point, six of our partner districts have had strong to exceptional participation from middle school teachers. One district has had fair participation, and one has no middle school participation so far. This is due in part to some changes in school administration and buy-in from key players in districts. We will continue to work on strengthening participation in all the districts. We look forward to a successful summer and capitalizing on the momentum generated from participants as they complete courses this summer.
- 2) Alabama's critical need for improved mathematics teaching and learning is recognized across Alabama as evidenced by the statewide efforts at reform, such as AMSTI, AMSTEC, MMI, and the Auburn MSP. Setting up a way to cooperate and collaborate in the statewide effort has been a challenge that we feel we are meeting in a timely and constructive manner. This collaboration holds great promise for sustainable reform across Alabama.
- 3) Coordinating the partnership and getting it up and running was a challenge because of the complexity of the project. The key to this success was the competent and committed people involved.

## **Section 2. Management Report**

### **Major Changes in the Organizational Structure of the Project**

In the first year of the Greater Birmingham Mathematics Partnership, the organizational structure of the project has developed largely as planned and is consistent with that proposed in our Five-Year Strategic Plan. Birmingham-Southern College serves as lead institution for the partnership. Subcontracts with the University of Alabama at Birmingham and the Mathematics Education Collaborative have been put into place to formalize partner relationships.

The most significant change in the project's organizational structure over the course of Year 1 has been the greater inclusion of school district representation throughout the project management structure. The eight participating area school districts have always been considered core partners from the project's inception. However, only one representative of the school districts initially served on the Management Team, the project's primary decision-making body. This disconnect was revealed in feedback from our NSF Program Officer, recognized, and addressed in the final version of the Five-Year Strategic Plan. In April, three school district representatives were added to the Management Team and now (including Ann Dominick) constitute more than one third of this body.

Additional changes have occurred in the composition of the Partnership Steering Committee and Project Design Team. Early in the year, the Partnership Steering Committee included two representatives from the project's evaluation team in order to facilitate communication. However, they have been removed from the Steering Committee and now serve as a completely separate Evaluation Team. This arrangement better reflects their status as objective external evaluators. In the case of the Project Design Team, we have enlarged the membership to include a much greater number of UAB mathematics faculty members (6) than previously planned (2) as well as including the Assistant Dean of the UAB School of Education. The Design Team now includes two deans, one associate dean, one assistant dean and one associate chair. GBMP also enjoys the strong support of both the BSC Provost and UAB Provost.

With respect to the key personnel serving on the project this year, Bernadette Mullins has served as Principal Investigator and Faye Clark and Ann Dominick have served as Co-Project Directors, as planned. Likewise, John Mayer, Ruth Parker, Ann Dominick and Melinda Lalor have served in Co-Principal Investigator roles. However, a promotion in the spring of 2005 has resulted in a reduction of Melinda Lalor's availability to the project. As a result, Dale Feldman has agreed to assume more project effort while Lalor's responsibilities have been reduced, although she remains an active project member. In particular, Feldman has replaced Lalor on the Project Management Team. There has been no change in Lalor's status as Co-Principal Investigator. These changes have been approved by the Program Officer and incorporated in the revised Five-Year Strategic Plan.

## **Section 5. Implementation Plan for Year 2**

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- 1. ALL THE ABOVE ACTIVITIES CONTRIBUTE TO GOAL IV**

# Greater Birmingham Mathematics Partnership

## Annual Implementation Plan: Year 2

Goal I: To increase the effectiveness of middle school mathematics teachers within GBMP school systems

<b>1. MEC Summer Courses (MSP Key Feature: T, P, C)</b>	
<b>September Tasks</b>	<b>Responsible Party</b>
Consolidate feedback from past summer courses.	Park
Begin planning of next summer courses.	Park
Seek opportunities to give “update” talks to stakeholders in districts.	Dorr
Continue collaborating with UAB mathematics faculty members to develop first new MEC course, <i>Extending Algebraic Thinking</i> .	Mill
<b>October Tasks</b>	<b>Responsible Party</b>
Continue planning of summer courses.	Park
Give “update” talks to stakeholders in districts.	Dorr
Continue collaborating with UAB mathematics faculty members to develop new MEC course.	Mill
<b>November Tasks</b>	<b>Responsible Party</b>
Continue planning of summer courses.	Park
Begin recruitment efforts for summer courses.	District Dorr
Create and distribute flyer to advertise and promote summer courses.	Dorr
Continue collaborating with UAB mathematics faculty members to develop new MEC course.	Mill
<b>December Tasks</b>	<b>Responsible Party</b>
Continue planning of summer courses.	Park
Continue recruitment and publicity efforts for summer courses.	District Dorr
Continue collaborating with UAB mathematics faculty members to develop new MEC course.	Mill

<b>1. MEC Summer Courses (continued)</b>	
<b>January Tasks</b>	<b>Responsible</b>
Continue planning of summer courses.	Park
Continue recruitment and publicity efforts for summer courses.	Dist Dorr
Continue collaborating with UAB mathematics faculty members to develop new MEC course.	Mill
<b>February Tasks</b>	<b>Responsible</b>
Continue planning of summer courses.	Park
Continue recruitment and publicity efforts for summer courses.	Dist Dorr
Select sites for summer courses.	Dorr
Begin processing enrollment information for summer courses.	Dorr
Begin researching items (manipulatives, supplies, etc.) to go into teacher kits.	Moo
Begin researching items (books, videos, etc.) to go into school professional development kits.	Moo
Continue collaborating with UAB mathematics faculty members to develop new MEC course.	Mill
<b>March Tasks</b>	<b>Responsible</b>
Continue planning of summer courses.	Park
Continue recruitment and publicity efforts for GBMP.	Dist Dorr
Notify teachers of course date assignments.	Dorr
Communicate information to teachers about UAB credit for MEC courses.	Dorr
Continue collaborating with UAB mathematics faculty members to develop new MEC course.	Mill
<b>April Tasks</b>	<b>Responsible</b>
Finalize plans for summer courses.	Park
Continue recruitment and publicity efforts for GBMP.	Dist Dorr
Attempt to accommodate teachers still requesting to attend summer courses.	Dorr
Order teacher kits.	Moo
Order school professional development kits.	Moo
Continue collaborating with UAB mathematics faculty members to develop new MEC course.	Mill

<b>1. MEC Summer Courses (continued)</b>	
<b>May Tasks</b>	<b>Responsible</b>
Continue recruitment and publicity efforts for GBMP.	Dist Dorr
Attempt to accommodate teachers still requesting to attend summer courses.	Dorr
Make final course placements.	Dorr
Prepare for orientation sessions to be held on the day before the start of each section of <i>Patterns</i> , <i>Functions</i> , and <i>Algebraic Reasoning</i> .	Dorr

Send information letter to participants about summer courses and orientations sessions.	Dor
Send letter to IHE faculty members prior to summer courses.	Park
Continue collaborating with UAB mathematics faculty members to develop new MEC course.	Mill
<b>June Tasks</b>	<b>Res</b>
Send materials for MEC courses.	Park
Set-up for MEC courses.	Dor
Host MEC courses.	Hoo
Offer orientation sessions prior to each section of <i>Patterns, Functions, and Algebraic Reasoning</i> .	Dor
Offer four sections of <i>Patterns, Functions, and Algebraic Reasoning</i> and three sections of <i>Probability and Data Analysis</i> (June and July).	Park
IHE faculty members participate in a MEC summer course.	IHE
IHE and MEC faculty members hold discussions following MEC courses.	IHE
Continue collaborating with UAB mathematics faculty members to develop new MEC course.	Mill
<b>July Tasks</b>	<b>Res</b>
Send materials for MEC courses.	Park
Set-up for MEC courses.	Dor
Host MEC courses.	Hoo
Offer orientation sessions prior to each section of <i>Patterns, Functions, and Algebraic Reasoning</i> .	Dor
Offer remaining sections of <i>Patterns</i> and <i>Probability</i> .	Park
IHE faculty members participate in a MEC summer course.	IHE
IHE and MEC faculty members hold discussions following MEC courses.	IHE
Continue collaborating with UAB mathematics faculty members to develop new MEC course.	Mill
<b>August Tasks</b>	<b>Res</b>
Complete development of first new MEC course, <i>Extending Algebraic Thinking</i> .	Mill

<b>2. IHE Course Redesign and Development (MSP Key Feature: I, P, T, C)</b>	
<b>Fall Tasks</b>	<b>Responsible</b>
Continue discussions among UAB mathematics and education faculty members about Middle School Certification route including the following options: (1) NSM major with concentration in mathematics plus education major. (2) NSM major with concentrations in mathematics and general science plus education major. (3) Mathematics major track plus education major. (4) Alternative Fifth-year program for middle grades mathematics.	May War Smit Feld
Outline new middle school major track in mathematics including required and recommended courses. Propose new middle school major track to Mathematics Department, School of Natural Science and Mathematics, and Provost's Office.	May
Continue collaborations with MEC on new MEC course <i>Extending Algebraic Thinking</i> . Begin redesigning in parallel UAB course MA 105, <i>Pre-Calculus Algebra</i> . Discuss with Engineering possible engineering projects for use in MA 105.	May War Smit Feld
Redesign MA 113, <i>Mathematics for Elementary School Teachers 1</i> , to more closely parallel MEC course <i>Patterns, Functions, and Algebraic Reasoning</i> , and re-title <i>Mathematics for K-8 School Teachers 1</i> .	Smit May War
Begin discussions among UAB mathematics, engineering, and education faculty about new calculus course sequence, <i>Calculus and Functions with Applications 1-2</i> .	War Feld Lalo



<b>2. IHE Course Redesign and Development (continued)</b>	
<b>Spring Tasks</b>	<b>Responsible</b>
Mathematics Department, School of NSM, and Provost's Office approve new middle school major track. Submit new middle school major track to UAB Board of Trustees as notification item (at Board's first Spring meeting).	May
Continue collaborations with MEC on new MEC course <i>Extending Algebraic Thinking</i> . Continue parallel redesign of UAB course MA 105, <i>Pre-Calculus Algebra</i> . Plan to pilot appropriate engineering projects in MA 105 in Fall, 2006.	May War Smit Feld
Offer redesigned MA 113 in Spring Semester at UAB.	Smit
Redesign MA 114, <i>Mathematics for Elementary School Teachers 2</i> , to more closely parallel MEC course <i>Geometry and Proportional Reasoning</i> , and re-title <i>Mathematics for K-8 School Teachers 2</i> .	Smit May War
Continue discussions among UAB mathematics, engineering, and education faculty about new calculus course sequence, <i>Calculus and Functions with Applications 1-2</i> .	War Feld Lalo
Begin redesign of MA 110, <i>Finite Mathematics</i> , to more closely parallel the MEC courses, <i>Probability and Data Analysis</i> and <i>Numerical Reasoning</i> .	May War
Add new middle school major track to UAB catalog.	May
<b>Summer Tasks</b>	<b>Responsible</b>
Offer redesigned MA 114 in Summer Term at UAB.	Smit
Complete collaboration with MEC on new MEC course <i>Extending Algebraic Thinking</i> . Complete parallel redesign of UAB course MA 105, <i>Pre-Calculus Algebra</i> .	May War Smit Feld
Complete development of new calculus course sequence, <i>Calculus and Functions with Applications 1-2</i> . Incorporate appropriate engineering projects in syllabus. Schedule first offering for Fall/Spring Semesters, 2006-07.	War Feld Lalo
Complete redesign of MA 110, <i>Finite Mathematics</i> , to more closely parallel the MEC courses, <i>Probability and Data Analysis</i> and <i>Numerical Reasoning</i> . Plan to offer redesigned MA 110 in Fall, 2006.	May War

<b>3. Middle School Certification (MSP Key Feature: T, I)</b>	
<b>Fall Tasks</b>	<b>Responsible Party</b>
Continue discussions among UAB mathematics and education faculty members about Middle School Certification route including the following options: (1) NSM major with concentration in mathematics plus education major. (2) NSM major with concentrations in mathematics and general science plus education major. (3) Mathematics major track plus education major. (4) Alternative Fifth-year program for middle grades mathematics.	May War Mea Feld
(Continued from Summer 2005) Request to propose Middle School Certification submitted to Alabama State Board of Education for approval. This gives UAB permission to develop the education checklist for the certification that will go back for approval in Summer 2006.	Fron
Develop course list for Middle Grades Certification checklist. Determine if new courses are needed.	Fron Mea
Coordinate proposed checklist with new major in the mathematics department.	Smit
Prepare proposal to State Department of Education for its approval and forwarding to State Board of Education.	Smit
<b>Spring Tasks</b>	
Submit full proposal for Middle Grades Certification.	Assc
<b>Summer Tasks</b>	
State Board of Education vote to approve certification (July 2006).	State

<b>4. Engineering Projects (MSP Key Feature: P, C)</b>	
<b>Fall Tasks</b>	<b>Responsible</b>
<p>Continue accumulating background information on:</p> <ul style="list-style-type: none"> <li>(1) Current mathematics textbooks used in GBMP school systems.</li> <li>(2) Equipment available to mathematics teachers in GBMP school systems.</li> <li>(3) Existing hands-on mathematics and science application activities.</li> </ul> <p>Engineering project (EP) development:</p> <ul style="list-style-type: none"> <li>(1) Review feedback from summer courses.</li> <li>(2) Modify existing EPs.</li> <li>(3) Develop 1 additional application for each strand with 4 levels of commitment at each grade level.</li> <li>(4) Prepare information to present at MST sessions.</li> <li>(5) Present information about EPs at MST sessions and get feedback from teachers at October meeting.</li> </ul>	Lalo McC
Continue discussions with UAB mathematics and education faculty members about Middle School Certification route.	I
<p>Begin redesigning UAB course MA 105, <i>Pre-Calculus Algebra</i>.</p> <p>Begin discussions with UAB mathematics, engineering, and education faculty about new calculus course sequence, <i>Calculus and Functions with Applications 1-2</i>.</p> <ul style="list-style-type: none"> <li>(1) Discuss the use of engineering experience projects (EEPs) for use in UAB courses.</li> </ul>	Lalo McC

<b>4. Engineering Projects (continued)</b>	
<b>Spring Tasks</b>	<b>Responsible</b>
<p>Continue accumulating background information on:</p> <ul style="list-style-type: none"> <li>(1) Current mathematics textbooks used in GBMP school systems.</li> <li>(2) Equipment available to mathematics teachers in GBMP school systems.</li> <li>(3) Existing hands-on mathematics and science application activities.</li> </ul> <p>Engineering project development:</p> <ul style="list-style-type: none"> <li>(1) Modify existing EPs.</li> <li>(2) Develop EPs for 1 additional strand with 3 applications and 4 commitment levels for each grade level.</li> <li>(3) Prepare information to present at MST sessions.</li> <li>(4) Present information about EPs at MST sessions and get feedback from teachers at January and March meetings.</li> </ul>	Lalo McC
<p>Continue redesigning UAB course MA 105, <i>Pre-Calculus Algebra</i>.</p> <p>Continue discussions with UAB mathematics, engineering, and education faculty about new calculus course sequence, <i>Calculus and Functions with Applications 1-2</i>.</p> <ul style="list-style-type: none"> <li>(1) Discuss the use of engineering experience projects (EEPs) for use in UAB courses.</li> <li>(2) Plan to pilot appropriate EEPs in MA 105 in Fall, 2006.</li> </ul>	Lalo McC
<b>Summer Tasks</b>	<b>Responsible</b>
<p>Engineering project development:</p> <ul style="list-style-type: none"> <li>(1) Develop applications (at each grade level) for 2 summer EPs (SEPs) that could be used in middle school classes.</li> <li>(2) Develop information about EPs and SEPs to disseminate at working luncheons held during MEC summer courses and for MST's.</li> <li>(3) Present information about EPs and SEPs at working luncheons and get feedback from teachers at both first and second courses.</li> </ul>	Lalo McC
<p>Complete redesigning UAB course MA 105, <i>Pre-Calculus Algebra</i>.</p> <p>Complete development of new calculus course sequence, <i>Calculus and Functions with Applications 1-2</i>.</p> <ul style="list-style-type: none"> <li>(1) Incorporate appropriate EEPs in UAB syllabi.</li> <li>(2) Schedule first offering of new calculus courses for Fall/Spring Semesters of 2006-07.</li> </ul>	Lalo McC

<b>5. Recruitment of Pre-service Teachers (T, I)</b>	
<b>Fall Tasks</b>	<b>Responsible</b>
Meet with UAB student services staff and recruiting staff to enlist support in student recruiting.	Smit Fron
Meet with staff of urban personnel prep grant to establish liaison and recruit from its cadre of new teacher recruits for Birmingham City Schools (mostly minority candidates).	Fron
Recruit pre-service teachers for summer courses.	Fron
Recruit minority pre-service teachers for summer courses.	Fron
<b>Spring Tasks</b>	<b>Responsible</b>
UAB Recruiting staff visits relevant classes.	Fron
Recruit pre-service teachers for summer courses.	Fron
Recruit minority pre-service teachers for summer courses.	Fron
Award pre-service teacher scholarships for summer courses.	Fron
<b>Summer Tasks</b>	<b>Responsible</b>
Pre-service teachers participate in summer classes.	Pre-

**Goal II: To increase the leadership capacity of middle school mathematics teachers within GBMP school systems**

<b>1. Mathematics Support Teams (MSP Key Feature: I, P, T)</b>	
<b>September Tasks</b>	<b>Responsible</b>
Prepare for October MST sessions.	Park
Order supplies for MST sessions.	Moo
Notify principals and teachers of selection of first cohort of MST's.	Liais
Select sites for MST sessions.	Dorr
Notify teachers of dates and site for MST sessions.	Dorr
<b>October Tasks</b>	<b>Responsible</b>
Send reminder about MST sessions.	Dorr
Deliver MST sessions.	Park
<b>November Tasks</b>	<b>Responsible</b>
Send follow-up communication to districts and MST's.	Dorr
<b>December Tasks</b>	<b>Responsible</b>
Prepare for January MST sessions.	Park
<b>January Tasks</b>	<b>Responsible</b>
Send reminder about MST sessions.	Dorr
Deliver MST sessions.	Park
<b>February Tasks</b>	<b>Responsible</b>
Send follow-up communication to districts and MST's.	Dorr
Prepare for March MST sessions.	Park
<b>March Tasks</b>	<b>Responsible</b>
Send reminder about MST sessions.	Dorr
Deliver MST sessions.	Park
<b>April Tasks</b>	<b>Responsible</b>
Send follow-up communication to districts and MST's.	Dorr

**Goal III: To unite the GBMP stakeholders in support of mathematics education programs that are high quality and effective**

<b>1. Sessions for Administrators (MSP Key Feature: P, I)</b>	
<b>September Tasks</b>	<b>Responsible</b>
Prepare for October administrator session.	Park
Select sites for administrator sessions.	Liaison
Notify administrators of dates and sites for administrator sessions.	Dorcas
Publicize administrator sessions.	Liaison
<b>October Tasks</b>	<b>Responsible</b>
Send reminder about administrator session.	Dorcas
Deliver administrator session.	Park
<b>November Tasks</b>	<b>Responsible</b>
Send follow-up communication to administrators.	Dorcas
<b>December Tasks</b>	<b>Responsible</b>
Prepare for January administrator session.	Park
<b>January Tasks</b>	<b>Responsible</b>
Send reminder about administrator session.	Dorcas
Deliver administrator session.	Park
Inform administrators that they are welcome to participate in MEC summer courses.	Dorcas
<b>February Tasks</b>	<b>Responsible</b>
Send follow-up communication to administrators.	Dorcas
Prepare for March administrator session.	Park
<b>March Tasks</b>	<b>Responsible</b>
Send reminder about administrator session.	Dorcas
Deliver administrator session.	Park
<b>April Tasks</b>	<b>Responsible</b>
Send follow-up communication to administrators.	Dorcas

<b>2. Outreach Activities to Parents and the Community (MSP Key Feature: P)</b>	
<b>Fall Tasks</b>	<b>Responsible Party</b>
Send update letter to individuals and businesses that supported or were asked to support the project.	Clarissa
Prepare for fall public sessions.	Park
Select sites for fall and spring public sessions.	Liaison
Arrange logistics for fall public sessions.	Clarissa
Create and distribute flyer to advertise and promote fall public sessions.	Clarissa
Publicize fall public sessions.	Liaison
Continue conversations with AMSTI and MMI.	Donna
Continue conversations with AMSTEC.	Meagan
Coordinate public session date to coincide with AMSTEC meeting.	Clarissa
Send invitations to CBAC, AMSTI, and SDE members and other key stakeholders to public session in conjunction with AMSTEC meeting.	Clarissa
Host fall public sessions.	District
Deliver public session #2 (and possibly #1) at six locations.	Park
Inform parents that some MEC scholarships are available for parents to participate in courses.	Clarissa
Send thank you letters to school and community members who assisted with public sessions.	Clarissa
Select dates for fall and spring CBAC meetings.	Clarissa
Select sites for fall and spring CBAC meetings.	Clarissa
Arrange logistics for fall CBAC meeting.	Clarissa
Set agenda for fall CBAC meeting.	Clarissa
Send reminder to CBAC members about fall public sessions and CBAC meeting.	Clarissa
Hold fall CBAC meeting.	Clarissa
Add CBAC minutes to MSPnet.	Clarissa
Forward NSF questions to CBAC chairperson and request timely response.	Clarissa
Send follow-up letter to CBAC members.	Clarissa
Expand GBMP website.	Clarissa
Update MSPnet.	Clarissa



<b>2. Outreach Activities to Parents and the Community (continued)</b>	
<b>Spring Tasks</b>	<b>Responsible Party</b>
Prepare for spring public sessions.	Park
Arrange logistics for spring public sessions.	Clar
Create and distribute flyer to advertise and promote spring public sessions.	Clar
Publicize spring public sessions.	Liaison
Host spring public sessions.	Dist
Deliver public session #3 (and possibly #1 and #2) at six locations.	Park
Inform parents that some MEC scholarships are available for parents to participate in courses.	Clar
Send thank you letters to school and community members who assisted with public sessions.	Clar
Continue conversations with AMSTI and MMI.	Don
Continue conversations with AMSTEC.	Mea
Invite AMSTEC leadership to visit summer courses.	Clar
Arrange logistics for spring CBAC meeting.	Clar
Set agenda for spring CBAC meeting.	Clar
Send reminder to CBAC members about spring public sessions and CBAC meeting.	Clar
Hold spring CBAC meeting.	Clar
Add CBAC minutes to MSPnet.	Clar
Send follow-up letter to CBAC members.	Clar
Update website.	Clar
Update MSPnet.	Clar
<b>Summer Tasks</b>	<b>Responsible Party</b>
Continue conversations with AMSTI and MMI.	Don
Continue conversations with AMSTEC.	Mea
Send update letter to CBAC members.	Clar
Update website.	Clar
Update MSPnet.	Clar

<b>3. Partnership-Driven Project Management (MSP Key Feature: P)</b>	
<b>Ongoing Tasks</b>	<b>Responsible Party</b>
Oversee the efforts of the Project Co-directors and Project Management Team.	Mullins
Serve as primary contact person for BSC administration and NSF.	Mullins
Serve as primary project director for the following project activities: MEC summer courses, mathematics support teams, sessions for administrators, and recruitment of pre-service teachers.	Dorsey
Serve as primary project director for the Partnership Steering Committee.	Dorsey
Serve as primary contact for articulation with the Mobile Mathematics Initiative (MMI) and the Alabama Mathematics, Science, and Technology Initiative (AMSTI).	Dorsey
Handle public relations with the school systems.	Dorsey
Serve as primary project director for the following project activities: outreach activities to parents and the community (including GBMP website and MSPnet), IHE course redesign and development, middle school mathematics certification, and engineering projects.	Clarke
Serve as primary project director for the Project Management Team, Project Design Team, National Advisory Board, and Community and Business Advisory Committee.	Clarke
Serve as primary contact for articulation with the Alabama Mathematics, Science, and Technology Education Coalition (AMSTEC).	Clarke
Handle public relations with the community.	Clarke
Seek appropriate media opportunities for GBMP.	Clarke
Keep PDs and PI and Evaluation Team informed about MEC courses and course development.	Park
Keep PDs and PI and Evaluation Team informed about MST's.	Park
Keep PDs and PI and Evaluation Team informed about sessions for administrators.	Park
Keep PDs and PI and Evaluation Team informed about outreach activities.	Park
Keep PDs and PI and Evaluation Team informed about IHE course redesign and development.	May
Keep PDs and PI and Evaluation Team informed about middle school mathematics certification.	Fron
Keep PDs and PI and Evaluation Team informed about engineering projects.	Feld
Keep PDs and PI and Evaluation Team informed about recruitment of pre-service teachers.	Fron
Keep PDs and PI and Evaluation Team informed about school system questions, concerns, input, and feedback.	Burr Harr

<b>3. Partnership-Driven Project Management (continued)</b>	
<b>September Tasks</b>	<b>Responsible Party</b>
Participate in Project Management Team meetings via email, phone, and in person, as needed.	Management Team
Attend NSF Evaluation Summit September 15-16, 2005.	Summit
Attend NSF Challenging Courses and Curricula Conference September 25-27, 2005.	Management Team representative
Remind Design Team about forthcoming NSF Management Information System online surveys.	Management Team
Call and set agenda for October Project Management Team and Design Team meeting.	Clarissa
Call and set agenda for October Partnership Steering Committee meeting.	Donna
Send letter to Steering Committee prior to meeting.	Donna
Prepare photo release form for project activities.	Management Team
Confirm logistical matters for annual National Advisory Board (NAB) meeting.	Clarissa
Send reminder to NAB members about meeting and requirements for travel reimbursement.	Clarissa
Hold first annual NAB meeting September 15-16, 2005.	Clarissa
Attend NAB annual meeting, as requested.	Design Team Steering Committee
Set date for 2006 NAB meeting.	Clarissa
Add NAB meeting minutes to MSPnet.	Clarissa
Pursue the design and selection of a project logo.	Clarissa
Submit invoices and documentation and any needed subcontractor reports to Grants Administrator.	MEC
Process submitted invoices and documentation and reports; verify that expenses and deliverables are in accord with the budget and the Annual Implementation Plan.	Management Team
Review invoices and reports forwarded by Grants Administrator.	Muller
Make payment on invoices after verifying allowability of expenses and availability of funds.	Thorpe
Deliver formative evaluation information as warranted.	Snyder
Respond to formative evaluation information when received.	Management Team

<b>3. Partnership-Driven Project Management (continued)</b>	
<b>October Tasks</b>	<b>Responsible Party</b>
Participate in Project Management Team meetings via email, phone, and in person, as needed.	Management Team
Complete NSF Management Information System online surveys.	Design Team
Send follow-up communication to NAB members.	Clarissa
Report to Management Team about NAB meeting.	Clarissa
Report to Management Team about Evaluation Summit.	Summit
Report to Management Team about CCC Conference.	Representative
Attend public session.	Design Team

	Stee
Attend CBAC meeting, as requested.	Desi Stee
Participate in Partnership Steering Committee meeting.	Stee
Participate in Project Management Team and Design Team meeting.	Desi
Report to Design Team, Steering Committee, and Evaluation Team about progress on MEC summer courses, mathematics support teams, sessions for administrators, and recruitment of pre-service teachers.	Dorr
Report to Design Team, Steering Committee, and Evaluation Team about progress on outreach activities to parents and the community, IHE course redesign and development, middle school mathematics certification, and engineering projects.	Clar
Discuss response to public sessions, administrator session, and MST sessions and the project co-directors' report.	Desi Stee
Discuss any questions, concerns, input and feedback from school systems.	Desi Stee
Add Steering Committee minutes to MSPnet.	Dorr
Add Management Team and Design Team meeting minutes to MSPnet.	Clar
Submit invoices and documentation and any needed subcontractor reports to Grants Administrator.	MEC
Process submitted invoices and documentation and reports; verify that expenses and deliverables are in accord with the budget and the Annual Implementation Plan.	Moo
Review invoices and reports forwarded by Grants Administrator.	Mull
Make payment on invoices after verifying allowability of expenses and availability of funds.	Thor
Deliver formative evaluation information as warranted.	Sny
Respond to formative evaluation information when received.	Man

<b>3. Partnership-Driven Project Management (continued)</b>	
<b>November Tasks</b>	<b>Responsible</b>
Participate in Project Management Team meetings via email, phone, and in person, as needed.	Manager
Send follow-up letter to District Liaisons summarizing Steering Committee Meeting.	Dorinda
Call and attend fall semester meeting with BSC Provost to discuss GBMP.	Clarissa Mullins
Add Provost meeting minutes to MSPnet.	Mullins
Submit invoices and documentation and any needed subcontractor reports to Grants Administrator.	MEC
Process submitted invoices and documentation and reports; verify that expenses and deliverables are in accord with the budget and the Annual Implementation Plan.	Moores
Review invoices and reports forwarded by Grants Administrator.	Mullins
Make payment on invoices after verifying allowability of expenses and availability of funds.	Thorpe
Deliver formative evaluation information as warranted.	Snyce
Respond to formative evaluation information when received.	Manager
<b>December Tasks</b>	<b>Responsible</b>
Participate in Project Management Team meetings via email, phone, and in person, as needed.	Manager
Call and set agenda for January Project Management Team and Design Team meeting.	Clarissa
Call and set agenda for January Partnership Steering Committee meeting.	Dorinda
Send letter to Steering Committee prior to meeting.	Dorinda
Submit invoices and documentation and any needed subcontractor reports to Grants Administrator.	MEC
Process submitted invoices and documentation and reports; verify that expenses and deliverables are in accord with the budget and the Annual Implementation Plan.	Moores
Review invoices and reports forwarded by Grants Administrator.	Mullins
Make payment on invoices after verifying allowability of expenses and availability of funds.	Thorpe
Deliver formative evaluation information as warranted.	Snyce
Respond to formative evaluation information when received.	Manager

<b>3. Partnership-Driven Project Management (continued)</b>	
<b>January Tasks</b>	<b>Responsible Party</b>
Participate in Project Management Team meetings via email, phone, and in person, as needed.	Management Team
Send update communication to NAB members.	Clara
Attend NSF MSP Learning Network Conference.	Management Team representative
Attend public session.	Design Team/Steering Committee
Attend CBAC meeting, as requested.	Design Team/Steering Committee
Participate in Partnership Steering Committee meeting.	Steering Committee
Participate in Project Management Team and Design Team meeting.	Design Team
Report to Design Team, Steering Committee, and Evaluation Team about progress on MEC summer courses, mathematics support teams, sessions for administrators, and recruitment of pre-service teachers.	Donna
Report to Design Team, Steering Committee, and Evaluation Team about progress on outreach activities to parents and the community, IHE course redesign and development, middle school mathematics certification, and engineering projects.	Clara
Discuss response to public sessions, administrator session, and MST sessions and the project co-directors' report.	Design Team/Steering Committee
Discuss any questions, concerns, input and feedback from school systems.	Design Team/Steering Committee
Add Steering Committee minutes to MSPnet.	Donna
Add Management Team and Design Team meeting minutes to MSPnet.	Clara
Submit invoices and documentation and any needed subcontractor reports to Grants Administrator.	MEC
Process submitted invoices and documentation and reports; verify that expenses and deliverables are in accord with the budget and the Annual Implementation Plan.	Moo
Review invoices and reports forwarded by Grants Administrator.	Mull
Make payment on invoices after verifying allowability of expenses and availability of funds.	Thor
Deliver formative evaluation information as warranted.	Sny
Respond to formative evaluation information when received.	Management Team

<b>3. Partnership-Driven Project Management (continued)</b>	
<b>February Tasks</b>	<b>Responsible</b>
Participate in Project Management Team meetings via email, phone, and in person, as needed.	Management
Send follow-up letter to District Liaisons summarizing Steering Committee Meeting.	Dorinda
Report to Management Team about MSP Learning Network Conference.	Management representative
Call and attend spring semester meeting with BSC Provost to discuss GBMP.	Clarissa Mull
Add Provost meeting minutes to MSPnet.	Mull
Call and set agenda for March Project Management Team and Design Team meeting.	Clarissa
Call and set agenda for March Partnership Steering Committee meeting.	Dorinda
Send letter to Steering Committee prior to meeting.	Dorinda
Begin preparations for second annual NAB meeting.	Clarissa
Submit invoices and documentation and any needed subcontractor reports to Grants Administrator.	MEC
Process submitted invoices and documentation and reports; verify that expenses and deliverables are in accord with the budget and the Annual Implementation Plan.	Moores
Review invoices and reports forwarded by Grants Administrator.	Mull
Make payment on invoices after verifying allowability of expenses and availability of funds.	Thompson
Deliver formative evaluation information as warranted.	Snyder
Respond to formative evaluation information when received.	Management

<b>3. Partnership-Driven Project Management (continued)</b>	
<b>March Tasks</b>	<b>Responsible Party</b>
Participate in Project Management Team meetings via email, phone, and in person, as needed.	Management Team
Evaluation Team requests any information needed for evaluation report by March 1.	Evaluation Team
Grants Administrator sends reminder about information needed for annual report by March 1.	Grants Administrator
Attend public session.	Design Team, Steering Committee
Participate in Partnership Steering Committee meeting.	Steering Committee
Participate in Project Management Team and Design Team meeting.	Design Team
Report to Design Team, Steering Committee, and Evaluation Team about progress on MEC summer courses, mathematics support teams, sessions for administrators, and recruitment of pre-service teachers.	Design Team
Report to Design Team, Steering Committee, and Evaluation Team about progress on outreach activities to parents and the community, IHE course redesign and development, middle school mathematics certification, and engineering projects.	Clarification
Discuss response to public sessions, administrator session, and MST sessions and the project co-directors' report.	Design Team, Steering Committee
Discuss any questions, concerns, input and feedback from school systems.	Design Team, Steering Committee
In preparation for the annual report, discuss year-to-date progress on MEC course registration and development, MST's, sessions for administrators, IHE course redesign and development, middle school mathematics certification, engineering projects, and recruitment of pre-service teachers.	Design Team, Steering Committee
Discuss the year-to-date efforts regarding public relations with the schools and the community, the efforts of the CBAC and NAB, and communication with AMSTEC, AMSTI, and MMI.	Design Team, Steering Committee
Discuss any needed revision to plans for next year based on what has been learned this year.	Design Team, Steering Committee
Add Steering Committee minutes to MSPnet.	Design Team
Add Management Team and Design Team meeting minutes to MSPnet.	Clarification
Submit invoices and documentation and any needed subcontractor reports to Grants Administrator.	MEC Administrator
Process submitted invoices and documentation and reports; verify that expenses and deliverables are in accord with the budget and the Annual Implementation Plan.	MEC Administrator
Review invoices and reports forwarded by Grants Administrator.	Multidisciplinary Team
Make payment on invoices after verifying allowability of expenses and availability of funds.	Thompson
Deliver formative evaluation information as warranted.	Snyder
Respond to formative evaluation information when received.	Management Team



<b>3. Partnership-Driven Project Management (continued)</b>	
<b>April Tasks</b>	<b>Responsible Party</b>
Participate in Project Management Team meetings via email, phone, and in person as needed.	Management Team
Send follow-up letter to District Liaisons summarizing Steering Committee Meeting.	Dorinda
Send update communication to NAB members.	Clarissa
Management Team sends information for the annual report to the Grants Administrator and Evaluation Team by April 1 including information for the (1) activities and findings report, (2) management report, (3) financial report (remaining encumbrances for the current year and the budget for the upcoming year), (4) information requested by the Evaluation Team, and (5) the annual implementation plan for the upcoming year.	Management Team
Management Team responds to Evaluation Team requests by April 1.	Management Team
Draft of activities and findings report, management report, and annual implementation plan for upcoming year sent to Management Team and Evaluation Team by April 15.	Clarissa
Continue preparation for annual National Advisory Board meeting.	Clarissa
Submit invoices and documentation and any needed subcontractor reports to Grants Administrator.	MEC
Process submitted invoices and documentation and reports; verify that expenses and deliverables are in accord with the budget and the Annual Implementation Plan.	Moo
Review invoices and reports forwarded by Grants Administrator.	Mull
Make payment on invoices after verifying allowability of expenses and availability of funds.	Thor
Deliver formative evaluation information as warranted.	Sny
Respond to formative evaluation information when received.	Management Team

<b>3. Partnership-Driven Project Management (continued)</b>	
<b>May Tasks</b>	<b>Responsible Party</b>
Participate in Project Management Team meetings via email, phone, and in person, as needed.	Management Team
Management Team responds to draft activities and finding report, management report, and annual implementation plan for the upcoming year by May 1.	Management Team
Evaluation Team completes evaluation report by May 1.	Evaluation Team
Project co-directors and co-investigators discuss the evaluation report and consider any needed responses or actions. Project co-director writes response to evaluation report by May 15.	Clarification
Final draft of activities and findings report, management report, and annual implementation plan for upcoming year sent to Management Team by May 15.	Clarification
Financial report completed by May 31.	Thompson
Confirm arrangements for annual NAB meeting.	Clarification
Add new participating middle school teachers and administrators to MSPnet.	Moores
Submit invoices and documentation and any needed subcontractor reports to Grants Administrator.	MEC
Process submitted invoices and documentation and reports; verify that expenses and deliverables are in accord with the budget and the Annual Implementation Plan.	Moores
Review invoices and reports forwarded by Grants Administrator.	Mullins
Make payment on invoices after verifying allowability of expenses and availability of funds.	Thompson
Deliver formative evaluation information as warranted.	Snyder
Respond to formative evaluation information when received.	Management Team

<b>3. Partnership-Driven Project Management (continued)</b>	
<b>June Tasks</b>	<b>Responsible Party</b>
Participate in Project Management Team meetings via email, phone, and in person, as needed.	Manager
Annual report submitted to NSF by June 1.	Monitor
Send details about annual meeting to National Advisory Board members.	Clarification
Submit invoices and documentation and any needed subcontractor reports to Grants Administrator.	MEC
Process submitted invoices and documentation and reports; verify that expenses and deliverables are in accord with the budget and the Annual Implementation Plan.	Monitor
Review invoices and reports forwarded by Grants Administrator.	Mull
Make payment on invoices after verifying allowability of expenses and availability of funds.	Thor
Deliver formative evaluation information as warranted.	Sny
Respond to formative evaluation information when received.	Manager
<b>July Tasks</b>	<b>Responsible Party</b>
Participate in Project Management Team meetings via email, phone, and in person, as needed.	Manager
Call and set agenda for January Project Management Team and Design Team meeting.	Clarification
Call and set agenda for January Partnership Steering Committee meeting.	Dor
Send letter to Steering Committee prior to meeting.	Dor
Set agenda for NAB meeting.	Clarification
Submit invoices and documentation and any needed subcontractor reports to Grants Administrator.	MEC
Process submitted invoices and documentation and reports; verify that expenses and deliverables are in accord with the budget and the Annual Implementation Plan.	Monitor
Review invoices and reports forwarded by Grants Administrator.	Mull
Make payment on invoices after verifying allowability of expenses and availability of funds.	Thor
Deliver formative evaluation information as warranted.	Sny
Respond to formative evaluation information when received.	Manager

<b>3. Partnership-Driven Project Management (continued)</b>	
<b>August Tasks</b>	<b>Responsible Party</b>
Participate in Project Management Team meetings via email, phone, and in person, as needed.	Management
Participate in Partnership Steering Committee meeting.	Steering Committee
Participate in Project Management Team and Design Team meeting.	Design Team
Report to Design Team, Steering Committee, and Evaluation Team about progress on MEC summer courses, mathematics support teams, sessions for administrators, and recruitment of pre-service teachers.	Design Team
Report to Design Team, Steering Committee, and Evaluation Team about progress on outreach activities to parents and the community, IHE course redesign and development, middle school mathematics certification, and engineering projects.	Clarification
Discuss response to public sessions, administrator session, and MST sessions and the project co-directors' report.	Design Team Steering Committee
Discuss any questions, concerns, input and feedback from school systems.	Design Team Steering Committee
Add Steering Committee minutes to MSPnet.	Design Team
Add Management Team and Design Team meeting minutes to MSPnet.	Clarification
Send follow-up letter to District Liaisons summarizing Steering Committee Meeting.	Design Team
Hold second annual NAB meeting.	Clarification
Add NAB minutes to MSPnet.	Clarification
Send follow-up communication to NAB.	Clarification
Submit invoices and documentation and any needed subcontractor reports to Grants Administrator.	MEC Administrator
Process submitted invoices and documentation and reports; verify that expenses and deliverables are in accord with the budget and the Annual Implementation Plan.	MEC Administrator
Review invoices and reports forwarded by Grants Administrator.	Multidisciplinary
Make payment on invoices after verifying allowability of expenses and availability of funds.	Thompson
Deliver formative evaluation information as warranted.	Snycer
Respond to formative evaluation information when received.	Management

Goal IV: To increase the mathematics achievement of all middle school students in GBMP schools and reduce discrepancies in disaggregated mathematics achievement data within these schools

All of the above activities found under Goals I-III also contribute to Goal IV.

**Key to 5 Key Features:**

C = Challenging Courses and Curricula

E = Evidence-Based Design and Outcomes

I = Institutional Change and Sustainability

P = Partnership-Driven

T= Teacher Quality, Quantity and Diversity

**Note Regarding Assignment of MSP Five Key Features in Matrix:**

Since more than one of the MSP Key Features describe most of the project's activities, the letter representing the key feature deemed most descriptive is listed first followed by the others that are applicable.

**Note Regarding Completed Column:**

At the beginning of the year, the above matrix serves as the Annual Implementation Plan. At the end of the year, the above matrix serves as the Implementation Matrix that will be attached as Exhibit 1 to the Activities and Findings section of the annual report. At the end of the year, an "X" will be placed in the "YES" column if the activity has already been completed by the end of May or is on track to be completed as scheduled between June and August. If the activity will not be completed by the end of August, the "NO" column will be filled in according to the legend below. An explanation will be given in the narrative for any action that is not carried out as planned.

D = action delayed

R = action revised

E = action eliminated

N = new action substituted