

INSTRUCTIONAL PROGRAM REVIEW & PLANNING

“The institution offers high-quality instructional programs in recognized and emerging fields of study that culminate in identified student learning outcomes leading to degrees, certificates, employment, or transfer to other higher education institutions or programs consistent with its mission. **Instructional programs are systematically assessed in order to assure currency, improve teaching and learning, and achieve stated student learning outcomes.**” This excerpt from the accreditation standards is a rationale for this work. This program review and planning document will be reviewed by the deans, and become the basis for the FPM/Block Grant, facilities planning, Box 2A and provide evidence for accreditation. Sections of this document will be reviewed by groups such as the Teaching-Learning Project, Curriculum Committee and SGC.

Program ___ MATHEMATICS - DEVELOPMENTAL _____

___ Degree ___ Certificate ___ Other _____

Submitted on _____ by the following faculty lead for the program:
(date)

(print name) (signature)

Reviewed and Approved by:

Dean _____
(print name) (signature)

Sr. Dean _____
(print name) (signature)

COLLEGE GOALS and INITIATIVES

As you review and prepare plans for your program, keep in mind current goals and initiatives developed for the college's Master Plan.

COLLEGE GOALS

1. Offer high quality programs that meet the needs of the students and the community.
2. Ensure the fiscal well-being of the college.
3. Enhance a culture of innovation, inclusiveness and collaboration.
4. Improve the learning of students and the achievement of their educational goals.
5. Establish a culture of planning, implementing, assessing and improving.

STRATEGIC INITIATIVES

1. Grow enrollments productively.
2. Improve the image of the college.
3. Increase the number of transfers, degrees and certificates.

I. ANALYSIS and QUESTIONS

Program review begins with the collection and analysis of data by the research office and instructional deans. The questions posed are based on an analysis of enrollment, productivity, success/retention, curriculum, college and community participation and program resources and development. For occupational programs, a copy of the Core Indicators Report is included. To access data, go to <http://siren/cognos>

1. Overall, enrollments have been consistent. New courses have redirected students in more useful ways. Math 25 and 30 declined in the last two years but have made a strong comeback this Fall. One area of concern is Math 26 during Fall/Spring. Are there ideas regarding this class? PSI courses seem to be dying a slow death. Are there plans to eliminate this mode of instruction?

Math 26: We need to offer Math 26 since it's a prerequisite for Math 40, but enrollments may be low because most students meet this prerequisite with high school geometry. We offer enough sections to meet current enrollment needs and provide flexible scheduling by alternating day and evening times. In the summer we offer more sections of Math 26 to accommodate the influx of high school students. The new A.A. math degree requirement that will be implemented statewide in 2009 allows any math course with an Elementary Algebra prerequisite to satisfy the degree; this might make Geometry a viable alternative to Intermediate Algebra and thus increase enrollments.

PSI: This mode of instruction is used in Math 1/2/7. Since FA 2003, the MDEC has encouraged the Math Department to decrease self-paced offerings. Currently, the department combines most Math 1/2 sections with Math 7. Math 7 is currently the recommended basic skills option by DSPS and some Voc-Tech programs. The MDEC plans to revamp basic skills offerings in the near future and will reconsider the role of self-paced instruction.

2. Productivity has been higher in the past but it seems the decrease has occurred at CCC and DVC too.

Productivity is an enrollment management issue. Productivity in Developmental Math is lowered by management's requests for us to offer courses at high schools, on weekends, and for special programs, all of which continue to have poor enrollments.

D.E. courses Math 12, 18, 25, 30 are full and have very high productivity.

We need the following information to be provided in future program reviews if we are to provide an informed response to productivity questions:

- What is the productivity for Math DE courses?
- What is the DE Math Program's productivity (by course) if we do not include specialized courses such as those being offered at the high school or for special programs?

3. Although retention rates are below the college average there is a sign of improvement. African Americans are noticeably below other ethnic groups. Are there ideas to improve this?

Response to #3 is grouped with #4 below.

4. The same trends apply to success rates. Overall success rates needs to be improved.

Success and retention rates are only part of the information we gather to ascertain our program's effectiveness. The DE Math Program is following the program evaluation philosophy adopted by the LMC Developmental Education Committee. We conduct formative evaluation based on three types of information: indirect measures (such as retention and success rates), direct measures of student learning, and qualitative measures. The findings from these types of data drive our decision-making and planning processes. See Appendix 1, the Developmental Math Program Update on Evaluation Practices SP 04, for an illustrative subset of examples of how data has been used to make programmatic decisions. Appendix 2 contains the Math DE Program Goals and Evaluation Plan. We encourage management to broaden its list of measures for program effectiveness to include measures of learning.

With that said, we will now respond to the issues raised in questions 3 and 4.

In future program reviews, it would be helpful if management clarified what is meant by "low success rates." To what are DE Math success rates being compared? Other programs at LMC, DE Math Programs in the district, state averages? In FA 01 and SP 04, we did an extensive comparison of our DE math course success rates to comparable courses at DVC and CCC and found our success rates exceeded those at both colleges for every DE math course. For basic skills/ prealgebra courses our success rates consistently hover at the state average and for Elementary Algebra our success rates usually exceed the state average significantly. So it is arguable whether our success rates are low.

Since the establishment of the DE Math Program, we have begun to implement a variety of programmatic approaches to improving student learning and success:

Assessment/Placement:

- with the help of the Office of Institutional Research we have conducted studies comparing success rates of students with different levels of preparation in order to determine appropriate prerequisites,
- made changes to the Accuplacer multiple measures questions and validated cut-scores,
- rewritten the questions used during matriculation for math placement advising,
- worked with counselors on norming advising recommendations

Staff development: every semester the MDEC offers the following professional development opportunities for DE Math faculty

- a course-specific Teaching Community that meets weekly or bimonthly
- a series of Elementary Algebra retreats
- a variety of flex activities
- updated classroom resources in the Blackboard Classroom for Developmental Math
- individualized orientation, curricular, pedagogical and assessment planning sessions with the DE Lead and peer teaching observations

Curriculum revision: the MDEC sponsored Teaching Communities have

- written new course outlines
- designed, piloted, assessed, and revised lots of classroom activities to focus the curriculum on program learning outcomes
- integrated real world problems throughout the DE Math curriculum to make math more relevant and interesting

Student Support: the Math Department has experimented with

- increasing contact hours in the classroom,
- supplemental instruction,
- in-class lab hours,
- Learning Communities

Assessment of Learning: every semester we have holistically assessed student learning in our capstone DE math course, Intermediate Algebra. We have seen impressive gains in student performance in problem-solving, use of multiple representations, and communication for students whose instructors use the classroom activities developed by the Teaching Communities.

Our hypothesis is that meaningful, systematic and consistent implementation of these approaches will eventually improve success rates. We are already seeing improvements in success rates for Math 25 since the new course outlines were implemented and staff development began. (Note: the state average hovers around 0.46 for Elementary Algebra)

	Fall 2002	Fall 2003	Fall 2004	Fall 2005
Math 25 success rates	0.508	0.548	0.561	0.634
		Implementation of new prerequisite, new COOR		

The SGC has provided financial support for the staff development efforts of the MDEC. However, we feel that we need the following support from management if we are to reap full benefit from these interventions:

- Encourage faculty to participate in professional development by enforcing the required flex obligation and publicly acknowledging the participation of faculty in specific professional development activities sponsored by the MDEC
- Require faculty to participate in assessment efforts by using accreditation as a mechanism for making faculty submit student work for assessment purposes (at least act like this is a management prerogative!)
- Schedule campus-wide forums (like College Assemblies) for faculty to share findings from assessment-related projects to help create a culture of assessment
- Provide support for the Office of Institutional Research so that we are able to obtain research results in a timely fashion for decision-making; include persistence data with program review
- Publicly emphasize the use of multiple measures for program evaluation; don't depend solely on retention and success rates. Ask for and use direct measures of student learning to promote the importance of learning on the institutional radar screen.

With respect to the observation about African-American students, we noticed that success rates for African Americans in developmental math are up 6% whereas the college is down 1%. But we acknowledge that though success and retention rates for African Americans are improving, the year-to-year rates fluctuate and are usually below the college average.

We request the following information be included in future program review data to inform our action plans for improving the success of African-American students:

- Breakdown success rates within ethnicity groups by age and gender (anecdotal evidence suggests that other ethnic groups have a larger percentage of returning, older students and women. We are wondering if part of the explanation is that African American students are predominantly young and male, which are two groups that anecdotally have lower success and persistence.)

- Compare our success rates for different ethnic groups to district and state averages for comparable programs (This will help us determine if the problem is within LMC or due to other societal factors beyond our control.)
 - Give us math placement and persistence data by ethnicity (Are lower overall success rates for African-Americans in DE Math explained by lower basic skills and prealgebra course success rates?)
5. There has been a lot of good work with curriculum. You are to be commended for your efforts! Thank you.
 6. How are relations with high schools and colleges? Are there plans to increase outreach/articulation with other institutions?

High School outreach: In Fall 2003 and Spring 2004, teams consisting of the Senior Dean of Academic Affairs and a management-chosen department designee (typically the department chair, co-coordinator of the Developmental Education Program, or math lead) visited each of our feeder high schools and met with math faculty and counselors to discuss issues related to developmental education (placement and prerequisites, DE program goals, high school student registration policies, etc.) In Fall 2006 the CCCCD joined CalPASS, which will provide the opportunity for data-sharing that will facilitate seamless transitions from high school to college.

Other colleges: Through the Carnegie grant, we have had periodic contact with developmental education faculty at ten other CA community colleges. In Fall 2006, we made presentations at Laney, City College of SF, and at the Strengthening Student Success Conference on our developmental math program. We have not had contact with 4-year colleges since none of our math developmental courses articulate with 4-year institutions.

7. Is the lab effective for developmental courses? The program should develop and implement a plan for improving the effectiveness of the math lab for DE classes.

The MDEC has worked for the last year on developing a process for evaluating the effectiveness of lab services for developmental students. At this point we do not have enough information to draw any conclusions as we are still working on the methodology. Here is what we have accomplished:

- The Math Lab Coordinator attended a Math Lab Conference in Fall 2005 with the goal of learning about best practices in lab evaluation; unfortunately, it appears that this is new territory with no best practices yet established in the field. Some labs are conducting studies of the correlation of lab attendance and course grades.
- We investigated different ways to mine the sign-in computer for measures based on lab attendance. We are working to establish a systematic (and hopefully time efficient) process for gathering and examining this data.
- A part-time instructor conducted a focus group with two sections of Intermediate Algebra students to ascertain student views of the services offered in the lab. The main finding was that students do not use the lab because they are too busy with work and family. An indirect implication is that instructors may not be requiring lab attendance and designing activities that must be completed in the lab.
- We designed and piloted an assessment project last spring to try to measure the impact of lab tutoring on helping students attain problem-solving skills. Preliminary results were encouraging.
- We continue to conduct comprehensive student satisfaction surveys every two years. Results are very positive.

PLAN See Section VII for our plan

III. STUDENT LEARNING OUTCOMES

PROGRAM LEVEL STUDENT LEARNING OUTCOMES

At the completion of the DE Math program,

Outcome 1: Students will read, write, listen to, and speak mathematics with understanding.

Outcome 2: Students will use mathematical reasoning to solve problems and a generalized problem solving process to work word problems.

Outcome 3: Students will demonstrate the ability to use verbal, graphical, numerical, and symbolic representations of mathematical ideas to solve problems.

Outcome 4: Students will recognize and apply math concepts in a variety of relevant settings and demonstrate the math skills and knowledge necessary to succeed in subsequent courses.

Outcome 5: Students will demonstrate the characteristics of an effective learner.

REVIEW

For action plans based on assessment results, see Appendix 3 for sample assessment reports for Math 25 (Fall 2003) and Math 30 (spring 2006).

PLAN

Each semester assess a subset of the DE Program SLOs for one DE course chosen by the MDEC. Results will inform curriculum development, student support services, and professional development activities. Every two years assess the outcomes 1-3 for the capstone DE course, Intermediate Algebra, and use results for overall program improvement.

Sampling design: Every semester require that all DE instructors submit student work. Students who were failing the course prior to the final will be excluded from the pool. Select a random sample of student papers from each section or each semester (depending upon the goals of the assessment).

Method: Use communal problems from the required common final exam that are aligned with the DE Program Outcomes and course SLOs. Holistically assess student work using at least two problems to ascertain student performance on each outcome. Invite all DE instructors to participate in the assessment.

Technique: For each final exam in the sample, assess the student work holistically relative to each outcome using a rubric written by a Teaching Community or MDEC.

Results and action plans: Disseminate results to all DE instructors and develop actions plans. Use actions plans to inform program improvement activities sponsored by the MDEC.

IV. CURRICULUM

REVIEW

1. Accreditation standard II.A.2.c. states that “High-quality instruction and appropriate breadth, depth, rigor, sequencing, time to completion, and synthesis of learning characterize all programs.” Explain how the program meets this standard, evaluating the extent to which it is coherent, comprehensive and also meets the needs of the students and community.

“breadth” of the program: We offer a wider range of developmental math courses than is typical in community colleges. For example, we offer non-algebra options for the AA degree, namely Liberal Arts math (Math 15) and Nursing math (Math 18). We offer a larger selection of options for the basic skills student than is typical (self-paced, computer-based, variable unit, with and without study skills, voc-tech focused)

“depth, rigor” across sections of a course: Maintaining consistent standards across sections of the same courses is a difficult task. We currently use the following strategies in an attempt to norm standards across sections:

Strategy	Theory behind the strategy	Problems we have encountered
Clear student learning outcomes in course outlines	Instructors have freedom in teaching style, but we all must get students to the same point by the end of the course. SLOs clearly define what students should know and be able to do.	Instructors are not use to teaching to broad SLOs. They typically teach straight through their texts so that the text defines the learning outcomes and standards of difficulty for the course. Since they are using different texts, equity among sections is undermined.
Communal final exam questions	Common final exam problems are aligned with the SLOs. So these problems should help instructors understand the SLOs and set a standard for the level of difficulty required.	The department does not enforce or even monitor the use of the common final exam questions. We need the department chair and the developmental math lead to work together to communicate departmental expectations about using common final exam problems.
Course-specific professional development	Teaching Communities, Math 25 retreats, and flex activities are designed around course SLOs. These venues provide an opportunity for faculty to come to a common understanding of what students should know and be able to do at the end of the course and to share teaching strategies.	For the last few years the majority of our part-time faculty have not had a flex obligation, so many have not participated in staff development. Scheduling policies in the math department have made scheduling weekly Teaching Community meetings difficult. In addition our scheduling policy makes it difficult for an instructor to subsequently implement their course-specific professional development because of reverse-seniority scheduling and lack of scheduling priority for those who have specialized and done professional development in a course. Math 25 retreats (offered on Friday afternoons) tend to be well attended.

Assessment of student learning	Student work collected across sections of the same course is assessed holistically at the end of the semester to determine how well students are achieving course and program SLOs. Assessment sessions provide the opportunity for instructors to discuss how they evaluate student work and to norm their expectations for student performance.	Few instructors submit student work for assessment and only a portion of those who might benefit the greatest (current instructors of the course being assessed) show up to grade the papers. We need the department and the college to send a clear message to faculty about expectations for participating in assessment activities. Department chairs and deans can have an impact on establishing a culture of assessment at the college.
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- “synthesis of learning” for sequential courses: The DE Math Program has five program-level SLOs, which represent “synthesized” abilities that students will attain by the end of the program. As we update our courses, course SLOs are aligned with these program SLOs. As we write common final exam questions for each course, these problems are designed to measure student ability relative to the program SLOs. When we assess student work at the course level, we look for different levels of performance relative to the program-level SLOs.
 - Packaging: We schedule sections of each course to insure a variety of scheduling options for students (morning, afternoon, night, Saturdays). Given the amount of remediation that many of our students need, we plan to investigate packaging options that could accelerate a students’ progress through the developmental math sequence.
2. How does the program ensure that its curriculum is up-to-date with new discoveries and changes in the discipline?

When revising curriculum, the MDEC

- Develops SLOs aligned with the standards of the American Mathematical Association of Two Year Colleges (AMATYC)
 - Aligns course SLOs and curriculum with program-level learning outcomes (for example, every activity in the Math 25 and Math 30 classroom packets have objectives that are aligned with the Math DE Program SLOs)
 - Responds to assessment results (for example, the Math 30 class activities have been revised three times to address areas of student weakness that surfaced across sections during the assessment of final exams ... and student performance has improved!)
 - Incorporates the principles of math education research (for example, see the website developed by the Math 12 Teaching Community in SP 06 where they document the impact of math education research on planning, teaching, and learning. Go to www.carnegiefoundation.org and search on Prealgebra Research Project: Impact of a Teaching Community)
3. Have all program course outlines been updated within the last 5 years?
We have made a lot of progress updating our course outlines but not all DE Math courses have been updated.

PLAN See curriculum objective in the planning section VII.

V. PROGRAM RESOURCES and DEVELOPMENT

REVIEW

1. Does the program have sufficient full-time faculty and staff? Refer to the FT/PT trends for FTEF. How does this affect the success of the program?

No, the Math Department does not have sufficient full-time faculty and staff.

Faculty:

- The department currently has **10** full-time faculty, but is offering enough courses to support **14 more full-time loads** (based on Spring 2007 Pittsburg offerings).
- From 2002 - 2005 our **total FTEF** (including Pittsburg and Brentwood) **has increased from 23.8 to 25.8**, while the number of **full-time math faculty decreased** by one. Since 2002, we have not hired a full-time professor, and one of our full-time (Pittsburg) professors resigned (effective 01/05).
- The **college and district** regularly call on our current full timers to assume various **leadership** positions. The cumulative release time within the department associated with these leadership roles typically exceeds 1.0 FTEF, causing us to rely even more heavily on adjunct faculty.
- We are having an increasingly difficult time finding adjunct faculty who are qualified and competent. In fact, **we have been requesting variances each semester** so that some of our adjunct faculty can teach loads of up to 1.8. Our only alternative is to cancel classes for lack of professors.
- At the present time, we have **10 classes that are not staffed for Spring 2007**.
- Our shortage of full-time faculty has diminished our ability to:
 - Evaluate faculty in a timely fashion;
 - Update our course outlines in a timely fashion;
 - Provide staff development;
 - Complete the process requires to hire adjunct faculty;
 - Provide enough office hours (as a department) for our students.

Staff:

- The number of classified staff for the math department (viz., one) has stayed **constant** since the college opened in the 1974. Since then, the number of students served by the math department has grown by a factor of about **1.8** (college FTES went from 3700 in 1977-1978 to 6800 in 2005-2006).
- We have **three labs** but only **one classified staff** member. The department is not able to **proctor** students taking tests in the lab for lack of staff.
- The new math building was designed for two classified staff.

2. Describe program faculty/staff participation in staff development. What staff development activities are needed to improve the program?

The MDEC offers the following professional development opportunities for DE Math faculty:

Professional Development Activity	Typical number of participants	Frequency
a course-specific Teaching Community that meets weekly or bimonthly (check out the cool website that the Prealgebra Teaching Community produced in SP 06 at www.carnegiefoundation.org , search on Prealgebra Research Project: Impact of a Teaching Community)	From 3 to 12 instructors teaching the same course	Every semester for the last 3 years
Elementary Algebra retreats (2 to 4 a semester)	From 5-10 Elementary Algebra instructors	Every semester for the last 2 years
Flex activities (including assessment sessions)	5-10 DE Math instructors	3 flex activities each semester for the last 4 years
Individualized orientation, curricular/assessment mentoring	5-7 new DE Math faculty	Every semester for the last two years

In Fall 2006 we are piloting a Scholarship of Teaching and Learning Seminar with the DE English Program. Instructors are conducting classroom-based research projects and producing webpages to document what they have learned.

The goals of our professional development activities are:

- Use the assessment of student work for course/program improvement
- Apply the findings of current math education research to curriculum and pedagogy
- Create greater equity for students and ensure student preparedness for subsequent courses by norming depth and level of difficulty in sections taught by different professors

In the future we plan to continue our current approach to professional development, with an added emphasis on training for new adjunct faculty. The MDEC will continue to define the focus of professional development activities in response to assessment of student learning and other program needs.

3. What additional facilities and equipment is required to maintain or improve the effectiveness of the program?

Additional facilities and equipment that may be required to maintain or improve the effectiveness of the Math program are:

- Additional computer classrooms: as effectiveness and design of computer aided instruction is improved, and its use increases, additional computer classroom(s) may be needed.
- “Smart Classroom” equipment purchased and installed: Assess the need for additional “Smart Classroom” equipment based on usage and requests from instructors.

- Additional computers in the open Math Lab(s) for student use: assess the use of the computers in the Math Lab to determine if additional computers would be of benefit for students doing their CAI assignments.
 - Computers for the Adjunct Faculty's Office: Determine the need for additional computers in the math Adjunct Faculty's Office based on their needs and schedules.
 - Additional calculators and overhead equipment for calculator use: Determine if additional calculators are needed for use in classrooms; determine the need for additional overhead equipment for calculator use in classroom.
4. Does the program have a sufficient budget? How would budget increases improve the program's effectiveness?

As a result of the institutionalization of Title III efforts, the MDEC has ongoing funds from the college for its professional development activities and 0.5 load release for a Developmental Math Lead. This support has been instrumental in implementing the innovative changes that characterize our program. As a result of these changes, we have seen improvements in student learning in Math 30 (see Appendix 3) over the last two years. Success rates in Math 25 are slowly improving, though we continue to struggle with the challenge of creating uniform standards across sections, training new adjunct faculty, and implementing best practice in a consistent manner across classrooms.

Other than this support, the Math DE Program does not have a separate budget from the Math Department. So the issues raised in the Transfer Math Program Review, relative to budget constraints, are shared by our program. In particular, please see section 5 of the Transfer Math Program Review for an analysis of the budgets for supplies, copying, tutoring, and staffing.

PLAN

Write planning objectives for addressing the review of staff development, and human, facilities and financial resources.

See Section VII for plans about staff development. See the Transfer Math Program Review for plans about addressing human, facilities and financial resources.

VI. OTHER ISSUES

This section is for issues not addressed previously in this report.

REVIEW

Detail other issues or items program faculty and staff have determined to be significant.

PLAN

Write planning objectives to address the additional issues detailed above.

VII. PROGRAM PRIORITIES

PROGRAM ACTION PLAN

College goal	Objective	Activity/Action	Timeline
College goals #1, 4, 5 Operational	Curriculum Branch: <i>Continue to examine and redesign curriculum in the Math DE Program. In particular, work on Basic Skills, Geometry, and courses affected by the upcoming change to AA degree requirements</i>	Basic Skills Revise the basic skills offerings (Math 1/2/7, 4, and 9) based on the following information and goals: <ul style="list-style-type: none"> • Determine the target population for each course to address the diversity of student needs (survey of student interest and educational goals) • Meet the needs of service programs (survey and retreat with DSPS, Occ. Ed., VN Nursing, etc) • Align courses with the DE Math Program SLOs • Develop course-level SLOs that balance the role of “drill”/procedural skill acquisition, quantitative literacy skills, and problem-solving in a real world context • Address best practice in the field of Developmental Education • Investigate the way these courses are packaged (short-term intensive, “boot camp”, online quick review, etc.) <p>Use institutional research, program assessment, and math education research to determine which basic skills courses will continue to be offered.</p> <p>If self-paced courses remain part of the DE program, redesign these course outlines (Math 1, 2, 7) to incorporate the DE program learning outcomes and align them with the DE program; develop criteria and instruments to assess revisions to course outlines; assess revisions</p>	Spring 2007: information gathering and planning Fall 2007: course outline revision
		Math 15: Determine the role of Math 15 given upcoming changes to the AA If Math 15 continues to be part of the curriculum, revise the course outline, including incorporating the DE program learning outcomes and aligning this course with the DE Program; develop criteria and instruments to assess revisions; assess revisions.	Spring 2007
		Math 26: Update COOR to align course learning outcomes with the Math DE Program SLOs and to incorporate findings from the following: <ul style="list-style-type: none"> • Survey of Math 26 students’ educational goals or reasons for taking Math 26 • Geometry course outlines from other colleges • math education research 	Spring 2007-Fall 2007

College goals #1, 4, 5 Operational	Student Support Branch: <i>Assess student support services in the Math DE Program</i>	<ul style="list-style-type: none"> Clarify the goals of lab services Develop a systematic process for evaluating the effectiveness of lab services, including direct, indirect, and qualitative measures Work with faculty to meaningfully integrate lab services with classroom instruction 	Spring 2007 or Fall 2007
College goals # 4, 5 Operational	Equity	<ul style="list-style-type: none"> Conduct a retention study to understand why students drop their math classes Revise the DE Math Research agenda to include placement and persistence data broken down by ethnicity Research interventions to address equity issues (e.g. MESA) Obtain Title V funds (or other funding) to pilot initiatives identified in the research (e.g. Learning Communities, peer mentoring, tutoring for athletes,) 	Fall 2007 Spring 2008
College goals #1, 3, 4, 5 Operational	Professional Development Branch: <i>Implement a comprehensive and coherent professional development program for faculty teaching and other staff supporting DE courses</i>	<ul style="list-style-type: none"> Continue to implement a structured orientation for new DE Math faculty Continue to offer Teaching Communities (with an initial focus on Prealgebra) and Scholarship of Teaching and Learning Seminars Continue to offer Elementary Algebra retreats (with a focus on teaching to the DE Math Program SLOs, norming standards, and assessment of student work) Continue to offer flex activities (with a focus on assessment of student work for the purpose of program improvement, orientation to the Math DE Program) Rework scheduling policies so that instructors who participate in extensive staff development efforts connected to specific curriculum are allowed priority in teaching that curriculum. 	ongoing
College goals #1, 3, 4, 5 Operational	Program Assessment: <i>Conduct ongoing assessment of all three branches of the Math DE Program</i>	<ul style="list-style-type: none"> Continue to conduct assessment of student learning for course/program improvement Update the research agenda with Humberto Develop a plan for systematically assessing lab services and tutoring using direct, indirect, and qualitative data Develop a plan for systematically assessing professional development activities, including direct measures of implementation of program SLOs into teaching and learning 	ongoing

VIII. ANNUAL PROGRESS

See Appendix 4, Fall 2006 Progress Report on Developmental Math Program Action Plan from the Math Department's 2003-04 unit plan

Appendix 1

Update on Evaluation Practices

Appendix 2

DE Math Program Goals and Evaluation Plan

Appendix 3

Sample Assessment Reports

Appendix 4

Fall 2006 Progress Report on
Developmental Math Program Action Plans
from the Math Department
2003-2004 Unit Plan