Math 2010-11

MTH 025 Packet Materials

Summary:

This initiative seeks funding for substantial updating and enhancement of the MTH 025 Basic Mathematics Applications packet, which is used extensively in the MTH 025 course along with a reference text. The packet consists of warm-up problems, activities, homework problems, and projects. The improvements will positively impact student learning and retention.

Description

*MTH 025 Basic Mathematics Applications is a course that explores the application of arithmetic concepts to real-world problems. The course includes a review of concepts through warm-up and homework problems, and the application of concepts and problem solving skills to complete activities and projects. The relevance and effectiveness of these materials is maintained through updating of applications and incorporation of current best practices. The packet currently being used is over 10 years old.

*MTH 025 is a requirement for a number of AAS degrees including Culinary Arts and Food Service Management, Early Childhood Education, Electrician Apprenticeship Technologies, Graphic Design, and Human Services. It is also a requirement for cerfiicates in GIS, Baking and Pastry, Food Preparation and Production, Dental Assisting, Early Childhood Education, Limited Electrician Apprenticeship Technologies, Electrician Apprenticeship Technologies, Graphic Design, Health Records Technology, Medical Transcriptionist, Medical Coding, Food Service Management, Restaurant Ownership, Adult Development and Aging, Massage Therapy, Occupational Skills, and Professional Truck Driver. As MTH 025 is an applied course and requirement for a number of degrees and certificates, it is important that the course materials be current and relevant to students. The quality of the materials has an impact on the persistence and success of students in their math and other courses, and ultimately on degree and certificate completion.

*In the document titled *Beyond Crossroads, Implementing Mathematics Standards in the First Two Years of College* published by AMATYC (The American Mathematical Association of Two-Year Colleges), there is a call to provide qualilty materials that foster development of math problem solving skills and help students see connections between mathematics and real-world problems.

*A MTH 025 reference text search is scheduled for Spring term 2010. The Summer and Fall terms of 2010 will be an ideal time to update the packet materials and ensure alignment with the chosen reference text.

Questions and Answers

How is the initiative linked to the Unit Plans most recently submitted?

- 1. How does it continue the achievement of those goals?
- 2. If this is a continuation of an initiative started last year, make sure that relationship is clear.

How is this initiative linked to the efficiencies and productivities plans you had last year?

- 1. How does it continue the achievement of these plans?
- 2. If this is a continuation of an efficiency or productivity plan started last year, make sure that relationship is clear.

This initiative is related to the third goal in section III of the Math Division unit plan for 2009-10. The goal is titled, "Improve aticulation in developmental math." A review and update of the MTH 025 packet is listed as one of the activities for accomplishing this goal. The packet materials will be updated with an eye to the content and outcomes of MTH 020 (the MTH 025 prerequisite) and math courses taken after MTH 025, which will result in better alignment. There will also be a focus on creating/updating materials for relevance, clarity, and value in learning problem solving skills - an important, tranferable skill. Increased retention and success rates may also positively impact graduation rates for AAS degrees and certificates for which MTH 025 is a requirement.

In section III of the previous year's unit plan, a goal to "Improve aticulation in developmental algebra" was included. The overall intent of this goal was similar.

Describe the resources needed:

100 hours of curriculum development funding for faculty to implement curriculum changes.

100*29.15*1.312=\$3,824.48

What specific measurable program outcomes do you expect to achieve with this initiative? The outcomes should be specific enough to be measurable. Also, outline the method that will be used to determine the results.

*Improved student retention and success rates in MTH 025

Department Priority:

2

Unit Resources:

Funding Request: Carl Perkins

Is this a Career & Technical Education program approved by the state and offered through Lane for credit?

No

If not a Career & Technical Education program, does your request provide considerable support for students enrolled in these programs?

Yes

Do you have an advisory committee that meets 2-3 times per year?

Yes

If request is for personnel, will funds be used to replace an existing position?

How will funding this initiative increase or sustain the academic achievement and technical skills attainment (GPA of 2.0 or better) of Career and Technical Education students?

Career and Technical students for whom MTH 025 is a requirement will benefit from the funding through greater understanding of the course material and improved problem solving skills.

How will funding this initiative increase or sustain the number of CTE students that graduate or receive a one year certificate from Lane and help prepare the students for employment?

*Increased retention and success rates in MTH 025 may positively impact completion rates for degrees and certificates for which MTH 025 is the requirement.

*Improvements to the course materials will help ensure that students learn math problem solving skills and see the connection between math and real-world problems. These are skills that transfer to the workplace.

EQUIPMENT \$

COMPUTER HARDWARE \$

COMPUTER SOFTWARE \$

MATERIALS & SUPPLIES \$

CURRICULUM DEVELOPMENT (Hours)

100

PART-TIME FACULTY \$

TIMESHEET STAFF \$

TRAVEL \$

Can this initiative be partially funded?

Yes

EQUIPMENT \$

(E) Explanation of effect of partial funding:

COMPUTER HARDWARE \$

(CH) Explanation of effect of partial funding:

COMPUTER SOFTWARE \$

(CS) Explanation of effect of partial funding:

MATERIALS & SUPPLIES \$

(MS) Explanation of effect of partial funding:

CURRICULUM DEVELOPMENT (HOURS)

70

(CD) Explanation of effect of partial funding:

A portion of the packet can be completed with partial funding.

PART-TIME FACULTY \$

(PF) Explanation of effect of partial funding:

TIMESHEET STAFF \$

(TS) Explanation of effect of partial funding:

TRAVEL \$

(T) Explanation of effect of partial funding:

Funding Request: Curriculum Development

1. List the following information

- Course Numbers (titles if not currently offered)
- Instructor Name(s) who will work on the curriculum development
- Whether each of the courses is in, or has been through, the curriculum approval process

*MTH 025 *Berri Hsiao, Ann Brentmar *Yes. Approved course.

2. List each course number (or title) and the materials to be created for each class

- Instructional goals, objectives, syllabi and outlines
- Lab instruction packets
- Practice, quiz, presentation &/or demonstration materials
- Other (specify)

*Warm-up problems *Activities *Homework problems *Projects *Answer keys

3. List each course number (or title) and give your timeline for beginning and completing each course curriculum development.

Begin June 21, 2010 Complete by December 12, 2010

4. What are up to 3 departmental instructional goals that are met through the development of curriculum in each class?

*Increasing student retention and success

*Meeting the needs of programs mathematics courses support *Providing quality, relevant instructional materials that promote math problem solving skills consistent wth AMATYC standards

5. List each course number (or title) and give the value of the development of curriculum in each course to other faculty members.

The packet materials will be used by instructors teaching MTH 025.

6. List each course number (or title) and say how many students will be served by the development of curriculum in each class.

About 200 students per year enroll in MTH 025.

7. List each course number (or title) and give the specific benefits to students that you expect from the development of curriculum in each class.

*Increased student retention and success

*Relevant materials that illuminate concepts and improve problem solving skills

8. List each course number (or title) and give the specific benefits for diversity that you expect from the development of curriculum in each class.

*Increased student retention and success for all students

9. List each course number (or title) and give the specific benefits to sustainability that you expect from the development of curriculum in each class.

*Incorporation of sustainability example(s) in materials

10. List each course number (or title) and give the specific effects on distributed learning that you expect from the development of curriculum in each class.

Hours requested for Curriculum Development funding:

Please enter the amount of one of the following:

- 100 hours maximum for new development.
- 70 hours maximum for course revision
- 50 hours for 3-4 credit conversion
- other (use if multiple courses addressed in one initiative

Do not enter any characters other than numbers and a decimal.

How many hours are you requesting? If there are multiple courses addressed in the initiative, please list each course number (or title) and give the number of hours requested for each course.

100

Can this initiative be partially funded?

Yes

Partially funded curriculum development HOURS requested:

70

Explanation of effect of partial funding:

Only a portion of the work will be completed.

Funding Request: Technology Fee