

Antoinette Dunbar, Deputy Superintendent
Curriculum and Instruction

**SUBJECT: REQUEST AUTHORIZATION FOR THE SUPERINTENDENT TO
ENTER INTO A CONTRACTUAL AGREEMENT WITH THE
UNIVERSITY OF LOUISVILLE, COLLEGE OF EDUCATION AND
HUMAN DEVELOPMENT, IN WHICH MATH-IN-CTE PROFESSIONAL
DEVELOPMENT/TECHNICAL ASSISTANCE WILL BE PROVIDED
FOR CAREER AND TECHNICAL EDUCATION TEACHERS AND
THEIR MATHEMATICS TEACHER PARTNERS**

COMMITTEE: INSTRUCTIONAL EXCELLENCE AND COMMUNITY ENGAGEMENT

**LINK TO DISTRICT
STRATEGIC PLAN: CONTINUOUS IMPROVEMENT MODEL**

At the July 11, 2007, meeting of The School Board of Miami-Dade County, Florida, The Board authorized the Superintendent to accept a grant award from the Florida Department of Education in the total amount of \$5,046,820, for funding under the Carl D. Perkins Career and Technical Education (CTE) Improvement Act of 2006. In accordance with the grant proposal submitted to FLDOE, authorization is requested for the Superintendent to enter into a contractual agreement with The University of Louisville, College of Education and Human Development, to provide professional development and technical assistance for approximately 45 Miami-Dade County Public Schools CTE/math teacher teams choosing to participate in the 2007-2008 Math-in-CTE Project. The contractual agreement with the University of Louisville, in the amount of \$68,050, provides for the delivery of year-long professional development in the Math-in-CTE model by four NRCCTE-trained facilitators. A total of ten (10) days of professional development will be offered to teacher participants throughout the 2007-2008 school year. The ongoing technical assistance and sustained meetings between CTE/math teacher teams will result in a community of practice that enhances the math embedded within seven CTE program areas, including business technology education, family and consumer science education, health science education, industrial education, marketing education, public service education and technology education. In addition, a minimum of ten math-enhanced CTE lesson plans for each of the seven program areas (a total of 70 lesson plans) will be developed by teacher teams and taught throughout the 2007-2008 school year by CTE teachers participating in the professional development sessions.

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The Math-in-CTE research study, conducted by the National Research Center for Career and Technical Education (NRCCTE) at the University of Minnesota, tested the impact of a professional development/pedagogic model on the mathematical achievement of high school career and technical education (CTE) students in five occupational areas. The model required the development of teams made up of CTE teachers drawn from agriculture, automotive technology, business/marketing, health science, and information technology and their mathematics teacher partners. CTE/Math teams of teachers within each of these areas were brought together for extended professional development (PD), 10 full working days over the course of an academic year, to teach them a pedagogy that was developed by the NRCCTE. Each CTE-math teacher team began the process by examining the regular CTE curriculum in order to identify embedded mathematical concepts (curriculum mapping). They then developed CTE lessons following the Math-in-CTE model to enhance the teaching of the existing mathematics within the occupational context. The CTE teachers scheduled and taught each of the math-enhanced lessons throughout the school year. A total of 136 CTE teachers and over 3,000 students took part in this study. After one year of exposure to the math-enhanced lessons, students in the experimental classrooms performed significantly better on TerraNova and Accuplacer, two of the three math posttests administered. The full report of the Math-in-CTE study (also titled *Building Academic Skills in Context*) can be found at the NRCCTE website: <http://education.umn.edu/nrccte/>.

The University of Louisville, College of Education and Human Development, has recently assumed the position as fiscal agent for Math-in-CTE Technical Assistance agreements.

The Professional Services Contract Committee established by School Board Rule 6Gx13-3F-1.021 reviewed this contractual agreement on November 29, 2007, and recommended that an exception to the rule regarding bids or Requests for Proposals be granted by the Committee because the contractor provides specific expertise in providing professional development in the teaching of the Math-in-CTE model and developing math-enhanced lesson plans for CTE program areas.

The appropriation for this item is included in the Contracted Programs Fund of the 2007-2008 Budget adopted in August, 2007, under:

Fund 0420, Function 6400, Program 3234, Object 5310, and Location 9600

RECOMMENDED: That The School Board of Miami-Dade County, Florida, authorize the Superintendent to:

1. grant an exception to School Board Rule 6Gx13-3F-1.021, based on specific expertise; and
2. enter into a contractual agreement with The University of Louisville, College of Education and Human Development, to provide for the delivery of year-long professional development in the Math-in-CTE model for approximately 90 career and technical education and mathematics teachers, in an amount not to exceed \$68,050, effective December 20, 2007 through July 5, 2008.

LCR/CM/RLM:rl0