

**LEGISLATIVE EDUCATION STUDY COMMITTEE
BILL ANALYSIS**

Bill No: SB 462

49th Legislature, 1st Session, 2009

Short Title: UNM Preschool-through-College Math Education

Sponsor(s): Senator Cisco McSorley

Analyst: Eilani Gerstner

Date: February 21, 2009

Bill Summary:

SB 462 makes an appropriation from the General Fund to the Board of Regents of the University of New Mexico (UNM) to implement the Preschool-through-College Mathematics and Science Education Center.

Fiscal Impact:

\$500,000 is appropriated from the General Fund to UNM for FY 10. Unexpended or unencumbered funds revert to the General Fund.

Issues:

According to UNM's analysis of SB 462, the Preschool-through-College Mathematics and Science Education Center, or "P-20 Mathematics and Science Education Center," is a statewide effort to improve the teaching and learning of mathematics and science throughout public and higher education.

UNM reports that the goals of the center are to:

- provide the necessary infrastructure to systematically increase the number of candidates recruited for and trained in secondary mathematics and science licensure programs;
- develop a program of study for K-5 math and science specialists to offer certificates for those who provide early mathematics intervention for at-risk students and hands-on science instruction to elementary students;
- play a leading role with other New Mexico universities in establishing a cohesive, statewide mathematics and science teacher education system; and
- actively maintain a website to publicize the statewide plan and create a portal for students from rural communities so that they can benefit from the center's programs and activities.

According to the Higher Education Department (HED) analysis of SB 462, "it is clear that [New Mexico] need[s] to increase the production of high school math teachers. The number [of math teachers New Mexico is] currently producing does not even replace teachers leaving through normal attrition...let alone add those necessary to deal with increased curricular demands" required by increased mathematics graduation requirements.

The Public Education Department (PED) analysis of SB 462 indicates that PED and the state Mathematics and Science Advisory Council¹ collaborate with faculty at UNM's P-20 Mathematics and Science Education Center and will continue to do so to support PED's goals for mathematics and science education.

In November 2008, the Legislative Education Study Committee (LESC) received reports from PED and the Mathematics and Science Advisory Council regarding mathematics and science education in New Mexico. According to the reports, among other issues:

- New Mexico will need approximately 100 more mathematics teachers to meet the new graduation requirement that, beginning with students entering their freshman year in school year 2009-2010, students must take four credits of mathematics, including the equivalent of Algebra II or higher; and
- PED has serious concerns about teacher supply because New Mexico's public universities produced 26 high school math teachers and 27 high school science teachers in school year 2007-2008 (there were also 30 high school math teachers on Internship licenses while working toward alternative Level 1 licensure).

The LESC has also heard concerns and recommendations regarding teachers' mathematics and science preparation each interim since 2006, which, taken together, indicate that New Mexico may benefit from (1) additional K-5 math and science specialists, and (2) a cohesive, statewide mathematics and science teacher education system as proposed in SB 462:

- in 2006, the LESC heard reports on the recommendations of the 2005 New Mexico Partnership for Mathematics and Science Town Hall, including the recommendation that colleges and universities increase the rigor of mathematics and science requirements for teachers by increasing the number of credit hour requirements in those subjects;
- in 2007, an LESC staff report included results of surveys of professional development providers and high schools, both of which reflected concerns regarding the mathematics and science skills of (1) elementary school teachers, and (2) middle school teachers with K-8 licenses; and
- in 2008, the LESC received the New Mexico Project 2012² report from the Mathematics and Science Advisory Council, which included the recommendation to improve mathematics and science content study in the pre-service education of K-12 teachers to prepare them to teach robust mathematics and science curricula while at the same time increasing the supply of those teachers.

¹ The Mathematics and Science Advisory Council was created in 2007 in the *Mathematics and Science Education Act* to advise PED and the Legislature regarding mathematics and science education appropriations and programs.

² New Mexico Project 2012, a project of the Mathematics and Science Advisory Council, is designed both to implement the Mathematics and Science Bureau's strategic action plan and to raise New Mexico student achievement in mathematics and science to among the top five states in the nation by 2012.

Current law requires students entering grade 9 beginning in school year 2009-2010 to complete additional credits of mathematics and science for graduation as follows:

- four units in mathematics (rather than three), one of which shall be the equivalent to Algebra II or higher, unless the parent submitted written, signed permission for the student to complete a lesser mathematics unit; and
- three units in science, two of which shall have a laboratory component (rather than one laboratory component).

Related Bills:

HB 322 *Increase Teacher License Math Requirement*

SB 273 *Teacher Reading, Math & Science Training*