

**LEGISLATIVE EDUCATION STUDY COMMITTEE
BILL ANALYSIS**

Bill No: HB 322

49th Legislature, 1st Session, 2009

Short Title: Increase Teacher License Math Requirement

Sponsor(s): Representatives Janice E. Arnold-Jones and Others

Analyst: Eilani Gerstner

Date: February 27, 2009 (revised)

Bill Summary:

HB 322 amends the *School Personnel Act* to require individuals seeking licensure or reciprocity in elementary education to take nine hours in mathematics rather than six.

Fiscal Impact:

HB 322 contains no appropriation.

Issues:

According to the Higher Education Department (HED) analysis of HB 322,

- while elementary education majors must take six hours of mathematics, they must take 12 hours each of science, history, and English; and
- although achievement in math has been increasing on both the New Mexico Standards Based Assessment and the National Assessment of Educational Progress, it is still below what is necessary for the majority of students entering high school to be ready for the new graduation requirements of four units of math including Algebra II or higher (see “Background” below).

Also according to HED, three New Mexico postsecondary institutions have already or are in the process of implementing requirements for elementary education majors to take nine or more credits of mathematics:

- the University of New Mexico has required nine hours of mathematics since the early 1980s;
- Eastern New Mexico University will implement a requirement of nine hours of mathematics beginning with the 2009 course catalog; and
- Western New Mexico University requires Bachelor of Science elementary education majors to take nine to 12 hours of mathematics.

According to the Public Education Department (PED) analysis of HB 322,

- the 2008 National Mathematics Advisory Panel report concluded that “it is clear that teachers’ knowledge of mathematics is positively related to students achievement” and recommends that “teachers must know in detail and from a more advanced perspective the mathematical content they are responsible for teaching”;

- the Conference Board of Mathematical Sciences recommends that prospective elementary teachers be required to take at least nine hours of mathematics; and
- HB 322 supports the Mathematics and Science Bureau’s “Strategic Action Plan for Advancing Math and Science Education in New Mexico,” and the Mathematics and Science Advisory Council’s recommendations in New Mexico Project 2012.

The Legislative Education Study Committee (LESC) has heard concerns and recommendations regarding elementary school teachers’ mathematics preparation each interim since 2006:

- in 2006, the LESL heard a report 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 LESL 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 LESL received the New Mexico Project 2012¹ report from the Mathematics and Science Advisory Council, which included the recommendation to “[p]rovide much better preparation in math and science content for newly-graduating teachers”, in part by increasing the minimum hours of mathematics for elementary education majors from six hours to nine hours.

Background:

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).

In November 2008, the LESL 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 requirements; 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).

¹ 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.

Related Bills:

SB 273 *Teacher Reading, Math & Science Training*

SB 462 *UNM Preschool-through-College Math Education*