

**Governor's Performance Scholarship  
Math and Science Four Year Course Offerings**

**How many schools do not currently offer the four years of math and science required in the  
GPS bill?**

**School Course Offering Counts for Mathematics and Science**

339 schools were considered because they enroll high school students.

• Offer less than four years of mathematics		32
○ 2 math courses	16	
○ 3 math courses	16	
• Offer less than four years of science		65
○ 2 science courses	32	
○ 3 science courses	33	

Of the total 97 schools listed above 16 are the same schools, from 7 districts, that do not offer either four years of math and science.

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## Support for SB0169A

### Rural Student Need and Potential number of Students Impacted:

- Few Small Rural Schools offer math and hard-science courses that successfully prepare students for degree programs in science, technology, engineering or math.
- Without those math and science courses students do not qualify for the AK Merit Scholarship (4 years of math and 3 of science or 3 years of math and 4 of science)

Estimated Potential Pool: A sum of the students who graduated from AK secondary schools with 10 or fewer graduates in 2011 (excluding the Anchorage, Fairbanks, Juneau and Ketchikan districts) gives a rough estimate of the potential number of students impacted. 548 students graduated from AK secondary schools with 10 or fewer graduates in 2011. Roughly 350 graduated from the regions served by UAF CRCD campuses. A subset of these students would potentially need distance delivered courses in their junior and senior years to qualify for the AK Merit based scholarship. (Data used are from <http://www.eed.state.ak.us/stats/> 2011 high school graduates by District by school)

### UA Dual-Credit Distance Delivery

- Currently, UA (CRCD and others) delivers dual-credit course math and science interactively via internet to rural secondary students in small schools (primarily math and Tech Prep). This could be expanded to accommodate more students.
- No other institution has the instructor and knowledge base, along with the delivery infrastructure to deliver math and science courses via distance to rural villages as effectively.
- However: UA Tuition costs are a barrier for many rural HS students; tuition support for secondary students is currently not consistent across school districts.
- SB0169A addresses tuition need for rural students, as well as providing tuition revenue the university to support expansion of delivery of the needed courses.

Description of a current course that is addressing the need for physical science in small secondary schools (developed and delivered through Interior-Aleutians Campus, CRCD, UAF):

*Bush Physics for the 21<sup>st</sup> Century*, (after the Northern colloquial term “*Bush*” meaning wilderness), is aimed at early college and high school students in the remote and often road-less villages of Alaska.

- Introduces the basic physics that explains the natural world with examples familiar to students in modern rural Alaska.
- Cultural and place-based connection.
- Stresses problem solving necessary for success in university science and math
- Direct delivery via Video-conference course content posted on web-based Black-Board™ , lecture videos available for download.
- Tutorial homework sessions using interactive internet classroom e-live™ (interaction is important for success.
- Course bridges semesters: late-start/early-end with a two week spring break to fit varied school schedules.
- 6 credit course translates to one year of high school science.
- Three-part laboratory component to give students a more complete laboratory experience at a distance.

**CRCD Campuses: Number of Sections of Tech Prep and High School Dual Credit Courses  
FY 2007 - FY 2011**

Campus	Fiscal Year					Campus Total
	2007	2008	2009	2010	2011	
Bristol Bay	2	8				10
Chukchi		1				1
Interior-Aleutians	2	4	4	10	14	34
Northwest		2				2
Rural College				2	1	3
UAF CTC	40	35	38	59	70	242
Fiscal Year Total	44	50	42	71	85	292

Source: UA Information Systems Banner SI, semester closing extracts.