



OREGON STATE SENATE

Testimony
March 9, 2017

Senate Education Committee

Chair Roblan and Committee:

For the record, I am Senator Mark Hass representing Beaverton and Aloha in Washington County. I am testifying in support of SB 420, as amended with the dash-1 amendment.

The goal here is (1.) to increase the number of students with math degrees, (2.) to make college more affordable and (3.) to produce an Oregon workforce that syncs up to the needs of our technology based economy.

Many of my constituents work in technology. One of my neighbors, an engineer for Mentor Graphics, said math is the backbone of any technology field, from programming to engineering. While I always thought of math as an instrument of torture, engineers see it as a building block of understanding. There is also some research to suggest that a disciplined study of figuring out answers to equations helps in all occupations. This research suggests that math majors make better doctors, lawyers, accountants and business managers.

As we know with Intel's presence in Oregon, computers and technology provides well-paying jobs. Beyond mere proficiency in computer programming, math majors are trained to address the more fundamental issues involved in the creation of new algorithms.

Furthermore, sophisticated applications of computers such as creation of computer graphics and the compression of video and audio signals (to name a few examples) involve a great deal of complex mathematics, and as a result, many computer companies specifically hire math majors.

So, a year ago, the legislature asked the Higher Education Coordination Commission to study the feasibility of this idea and the results are very promising.

Out of our discussions came this question: What if Oregon universities waived tuition for anyone who majors in math?

This would not only help students and employers, it would help create a much-needed niche among Oregon's universities – as a hub for math and technology.

One thing we know is that Oregon – like the rest of the country – doesn't provide enough math related graduates to meet the needs of employers. That's why the technology industry is forced to look overseas and elsewhere for qualified employees.

Wherever they come from, the fact is that the problem-solving capabilities of engineers and computer scientists put them in high demand.

I'd like to see Oregon become a mecca for math. I'd like to see tuition waived for qualified Oregon students who declare mathematics as a major.

The dash-1 amendment to SB 420 does two things: it encourages students to major in math by reimbursing them for upper level math classes in their third and fourth years. After talking to universities, educators, and administrators, this was the best way to help math majors. Second, it creates a task force to study ways to produce more certified math teachers. The bill recognizes that the pipeline to math degree attainment begins in elementary, middle and high school with high quality teachers.

This would not only help us produce more engineers, but also it would send a message far and wide about Oregon's focus on academics.

Math related degrees result in jobs that pay three times the median income, according to the US Bureau of Labor statistics.

And finally...this will help with access. Finances are still the number one obstacle for young people trying to go to college. Students in this country already owe \$1.2 trillion in student debt, surpassing credit card debt.

My hope is this would help make college affordable for students who see a future built on the building blocks of mathematics. My motto is...degrees, not debt.