

Measure would kill algebra 2 requirement for high schoolers

Representative says students need class with more practical skills

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PHOENIX – When was the last time you had to deal with logarithmic expressions?

Worked with polynomials and radical expressions?

Had to work out probability?

They're all part of what is generally considered algebra 2, one of the courses that Arizona high schoolers are required to take and pass.

More to the point, they are all things that a majority of the members of the state House do not think all students here need to know – or take that class – to get a diploma.

The 33-26 vote to quash the requirement came via proposal by Rep. John Fillmore, R-Apache Junction.

It would keep the obligation that students need four years of high school math. But it would instruct the state Board of Education to come up an alternative to algebra 2, with options including personal finance, computer science, statistics

or business math.

Fillmore said it is a recognition that the current requirements are not for everyone.

“We have been taking our kids and pushing them with college-oriented programs,” he said. What they need, Fillmore said, are more practical skills.

That, he said, includes the ability to amortize a loan, computing out the length of time to pay off a loan dependent on monthly payments and interest rates. It also means being able to do the kind of math necessary to be a good shopper, “understanding that sometimes 60% off an item in a retail store still may not be a good deal.”

The measure has its share of detractors.

Richard Nickel is president and CEO of Education Forward Arizona. That is the outgrowth of other organizations like Achieve 60, established years ago with the goal of ensuring that 60% of Arizona high

school graduates went on to something more, whether university, community college or even trade school – a goal that the state has yet to reach.

“The bill creates inequities that the state has been working hard to eliminate over the past decade by lowering expectations,” he told lawmakers during a hearing on the measure in

the House Education Committee. The result, Nickel said, would be to create separate “tracks” for students – those who want the opportunity for something beyond high school and those who do not – a move he said would disproportionately impact minority students “and those who may be the first in their family to have an aspiration of post-secondary.”

That’s also the concern of state schools chief Kathy Hoffman.

“The Arizona Department of Education is concerned about what reducing the current requirement for four years of math instruction could mean for a student’s eligibility to enter a post-secondary education,” said agency spokeswoman Morgan Dick. “We also believe having multiple pathways beyond geometry will allow for greater success based on a more personalized learning trajectory.”

Darcy Mentone, spokeswoman for the Vail Unified School District agreed that the ideal situation would be to have every student have four years of “very vigorous math” that would allow them to go directly to a four-year university after high school.

But she said it’s not realistic, with students who already were struggling with math in middle school suddenly facing a mandatory four years of math. And failing is not an option, Mentone said, with students forced to repeat what they did not get even as they are pushed into the next math course.

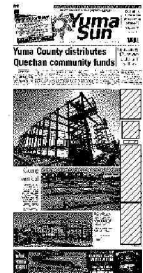
“The four-year math requirement, I believe, is the greatest contributor to our student dropout rate in Arizona,” she said.

And Mentone, who said she comes from a family of educators, acknowledged that not every child needs a four-year degree. Consider, she told lawmakers, her own 17-year-old son.

“Since Day One I’ve been talking to him about where he’s going to college,” Mentone told lawmakers. He decided, however, he’d rather attend Universal Technical Institute to become a diesel mechanic.

“And I’m fully supportive,” Mentone said. “I do not believe that a four-year university is right for every child.”

Rep. Michelle Udall, R-Mesa, who chairs the panel, acknowledged there



already is an alternative: Students who fail algebra 2 can ask for a “personal curriculum.”

But she told colleagues that becomes a bit of a game, with students purposely failing the first semester of algebra 2 to be able to get that option. HB 2278, Udall said, is a better way to go.

“It allows us to immediately engage them in math that they’re going to find more useful and more relevant to their own life – and hopefully as rigorous but that is in a field that they’re going to use,” she said.

It was Udall who took the lead this past week when the measure came to the full House. And to prove her point that what’s in algebra 2 isn’t for everyone, Udall decided to tell other lawmakers what are some of the standards for the course.

“Identify zeroes of polynomials when suitable factorizations are available and use the zeros to construct a rough draft of the function defined by the polynomial,” she read from the list. “Focus on quadratic, cubic and quartic polynomials, including polynomials for which factors are not provided.”

She offered to keep reading but said they would make no sense to most people “because they’re not things we use on a daily basis.”

What students do need, Udall said, are things like common sense, logic and reasoning.

“And there are several different math classes that would teach you those concepts,” she said, like personal finance and statistics.

“You’re going to learn real-world context and ways to use math, not only to do that critical thinking and that reasoning but in a way that might be more engaging to some students,” Udall said.

Most House Democrats

opposed the move.

“I think this bill is going to disproportionately impact students in low-income communities,” said Minority Leader Reginald Bolding, D-Laveen.

“It’s going to dumb down the standards,” he continued. “It’s not going to give our kids the resources and the opportunities they need to be successful at a further level.”

But Rep. Mitzi Epstein, D-Tempe, who said she loves math – and uses the things taught in algebra 2 – said she’s also a realist.

“I also know how that can turn people off to math,” she said. And Epstein said it comes down to having not just rigorous math but also relevant math.

“And currently our standards are not achieving relevant math,” she said.

That point did not go unnoticed by Dick. She said while the Department of Education opposes the legislation, it already is exploring options to algebra 2 that have “equal rigor and potentially more real world applicability for some post-secondary pathways,” something she said some other states have done.

The measure now heads to the Senate.