

Math placement can solve problems, can create others

By JORDAN HARRISON

Many students, despite being halfway done with the 2011-2012 school year, are still unhappy with the math classes they are taking. Although drop/add protocol allows seniors to adjust their classes more freely, many juniors feel that they are stuck in a math class that is not right for them.

When juniors take placement tests on Discovery Day, they are told that they can switch to a different level of math if they are placed in a class that is too easy or too hard for them. However, empirically, few students need to do so, but it is often easier to move down than to move up.

"There's usually one or two people per class that need to move one direction or another," said mathematics instructor Douglas Marks.

"Moving down is a discussion that a teacher has with a student individually, sort of looking at some classwork, at tests, at what questions are being asked, what they don't know, because if you show up in a calculus class and have no clue about algebra and pre-calculus things, it's not going to be a successful course for you. Moving up usually works a little differently. We usually don't allow moving up from pre-calculus to calculus, but you can move from pre-calculus to pre-calculus with topics, and a lot of times that's more student initiated."

Many students who have previously taken pre-calculus are discouraged when put in the class again. However, NCSSM's pre-calculus, which has the most sections of any math class here, focuses more on modeling and critical thinking than at most high schools.

"They take pains at NCSSM to make sure that pre-calculus is applicable here and that we can see the connections between other disciplines [and pre-calculus]," said senior Alexis Hibbler. "I know sometimes I saw things in pre-calculus again in physics and chemistry."

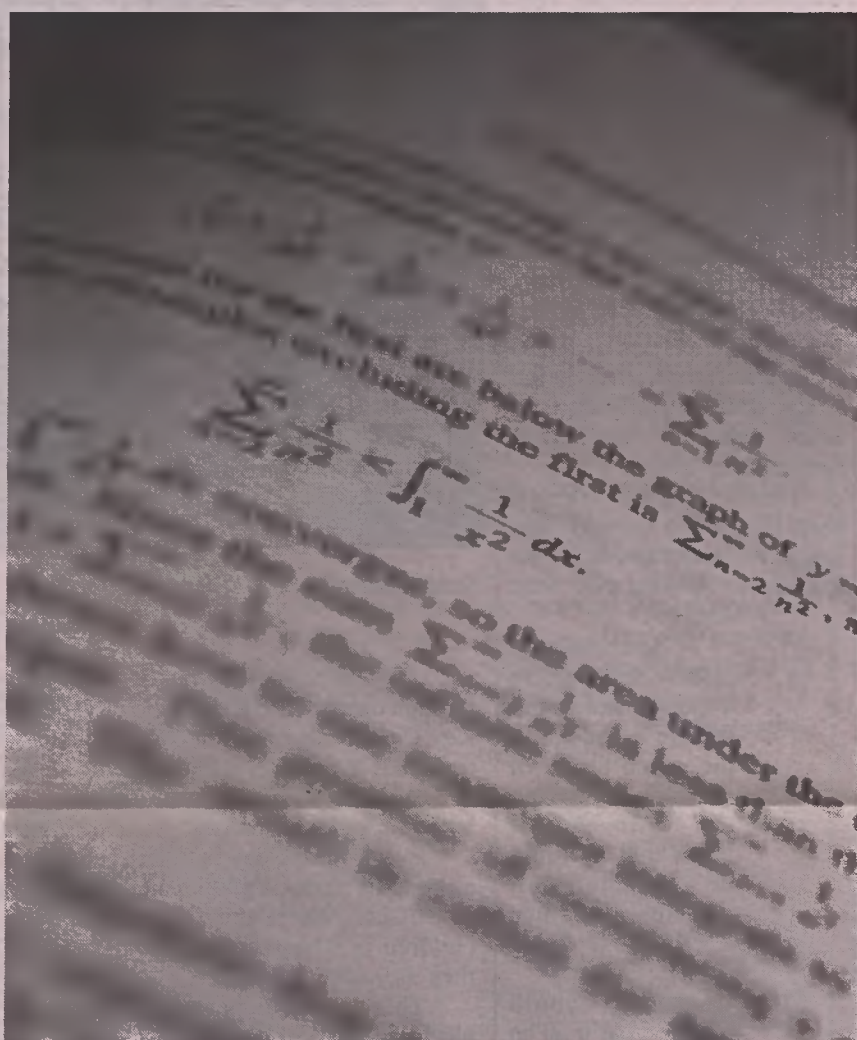
"Even when you compare pre-calculus in schools outside of Science and Math," said math instructor Philip Rash, "the term pre-calculus can be very vague...sometimes it's a review of a lot of algebra II-type things, usually it includes a section of trigonometry, but is it right-triangle trigonometry or function trigonometry? There are some pre-calculus courses

that are designed in such a way that you do a little bit of calculus in terms of limits or difference quotients."

Another restriction placed on juniors is that they cannot take AP Calculus AB, and while it may seem like the most sensible placement for a junior who has a strong pre-calculus background but does not feel

other people who are better at math. I feel like this school uses math as a measurement, and I don't think it's a quite accurate measurement."

The strict divisions between math courses may stigmatize people in less advanced classes and cause them to put too much emphasis on their level of math in their sense of self-worth as



Courtesy of Samantha Hartsoe

ready to take the BC curriculum, that student would then not be able to take BC Calculus during senior year as the two courses have considerable overlap. However, juniors who aim to take an upper-level math class such as Number Theory or Diff Eq need not worry about having to take pre-calculus.

"The only math class where finishing calculus is a pre-requisite is multi-variable," said Marks. "So in terms of math courses available to students who end up in Pre-calculus with Topics instead of AB Calculus, there's no [other] math course we offer that they can't take."

Clearly, math placement tests and placement restrictions are unavoidable and necessary, as is the occasional need for a student to take a course they took at their home high school, but the rigidity of NCSSM's math placement may cause a few different problems.

"I feel like every subject is related to math in a way, except for languages and humanities, but chemistry, physics, and sometimes biology are all related to what level of math you're taking," said junior Ying Qi. "For example, if you are taking pre-calculus you are more likely to be put in general physics, even if you might know more physics or if you are more into physics than

students.

"I feel like people overly emphasize what level of math they're in, and the administration does the same," said Qi. "People always ask me what math I'm in and I say, 'I'm in Multi' and then they're like, 'Oh, I'm only in pre-calc'. Math is not really how well you think; it's more of a build up [of previous knowledge]."

However, NCSSM students are supposed to help each other succeed, as evidenced by the school's no class rank policy, so others feel that math courses are not so stigmatized.

"We have math tutorial sessions every week night, and we have some students for whom it is there work service to help with math tutorial. We usually recruit students that are in or have already had calculus, and one of the neat things for me to witness is for some of those students who are more advanced in their math courses to sit down and explain something like exponential growth to a student in pre-calculus and explain it in a way that is not condescending or talking-down to them...I think one of the things that's neat about this school is that students are diverse in a lot of different ways, and mathematical diversity is just one of those such diversities," said Rash.

Fracking, election, economy fill news Outside the Bubble

By: SIDNEY PARHAM

The transition from 2011 to 2012 has been filled with domestic and international news that will shape the world for decades to come.

After an extremely close primary, Mitt Romney won the Iowa caucus for Republican presidential candidate, edging out second-place candidate Rick Santorum by a mere 8 votes

There are more reported dangers of the high dependence of the US on natural gas,

countries' economic crisis' and to determine what the next move should be to determine the stability of the European Union. The US welcomed the new year with a dropping unemployment rate.

As the European debt crisis worsens, French and German leaders have pledged to meet monthly to discuss financial and government issues.

Proposed agreements are designed to address a basic flaw within the EU: while currency



A fracking site in Pennsylvania

Courtesy of Vanity Fair

most recently, the discovery that natural gas extraction is causing earthquakes.

The natural gas extraction method known as "fracking" has been linked to the recent earthquakes in Ohio and Oklahoma.

According to scientists, deep wells used to inject wastewater and chemicals from hydraulic fracturing into the earth have slowly split faults lines causing tremors in the central plains. A drilling operation near Youngstown, Ohio was shut down after a 4.0 magnitude tremor rocked the town following several other quakes all coinciding with the installation of the deep well's installation in March 2011.

European leaders are meeting to deal with their

and fiscal policy are regulated, there is no procedure to ensure each member of the EU is economically stable.

US financial leaders have also been involved in the process; Treasury Secretary Timothy Geithner spent a week in Europe meeting with European financial leaders including Sarkozy.

On a more cheerful note, US economic prospects are looking good. Statistics for December 2011 show 200,000 jobs were added, lowering the employment rate to 8.5%.

Unemployment rates have been decreasing for the past six months, but America has yet to reach its pre-recession employment prosperity. Still, the job statistics are a tentative sign of recovery.

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