'Math Topics' adds creativity

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Advanced Topics in Mathematics II is a new course being offered at TPHS for the first time this school year and is taught by Math Department Chair Abby Brown.

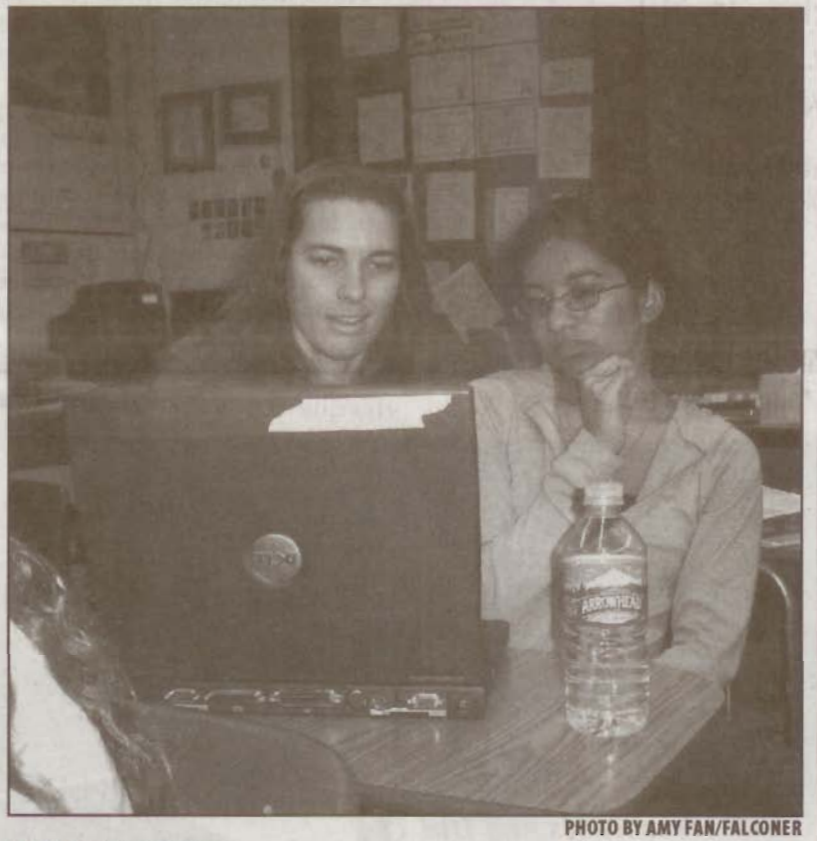
Students in the class are to apply high school math concepts to real-world projects. Their primary tool is Mathematica, a computer algebra system program developed by Wolfram Research, which also holds the Wolfram Technology Conference that Brown will attend this October, in Champaign, Ill. There, she will present materials she developed at Wolfram Research over the summer. Students accompanying her—Ryan Chuang (12), Samantha Patterson (12), Jenny Tan (12) and Jeffrey Tsao (11)— will also present work they did using Mathematica, a mathmatics software program.

"It's a great opportunity for us," Tsao said. "We're meeting all these professionals, and we're just high school students."

Ideas for projects include making an interactive tool to teach logarithms, or a simulation of momentum for a physics class.

"For community service projects we will be seeking out ideas from other [teachers] so that we can develop materials to [help them teach]," Brown said.

A flexible curriculum gives students plenty of freedom and independence, and is cited as one of the primary attractions of the class.



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BREAKING CONVENTION: Advanced Topics in Mathematics teacher Abby Brown instructs Shaoni Bandyopadhyay (12). This new math class applies math concepts to real-world projects.

"We enjoy [exploring topics of our own choosing], and we get some learning out of it," said Matt Schotz (12). "[The freedom] keeps me interested."

No tests are given and lessons—on Mathematica—are given on a need-to-know basis.

"It's not really traditional. [Brown will] teach you how to use Mathematica, and you go from there," Jamie Ding (11) said.

Even so, the students are there to work. Most of them, including Ding, have already exhausted the TPHS math courses, including college courses Calculus C/D and Linear Algebra.

"I felt that Discrete Math and Statistics weren't my thing," Ding said. "So I felt that this was the best choice."

For students, Advanced Topics was a chance to take their study of math to the next level.

"Right now, we are just getting started, but I have big ideas as to where this can go and how many students it may touch," Brown said.