

NSF funds USF's Web-based course in numerical methods

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**(TAMPA, Fla. June 3, 2004)** - Do you want to predict the velocity of a rocket? See if a mom and pop store will break even? Find how fulcrums of bascule bridges are assembled? Calculate the shortest and smoothest path for a robot?

Then you need to take a course in numerical methods.

Thanks to funding from the National Science Foundation, the University of South Florida, working in partnership with Florida A&M University and Wright State University, is developing Web-based modules for an undergraduate course in numerical methods that will provide a valuable resource to engineering students throughout the nation.

"Numerical methods is a required course for most engineering undergraduates," says Autar Kaw, a professor of mechanical engineering and principal investigator of the grant that brought in funds to produce a prototype and also the most recent grant (\$363,280) to keep developing the site. "Numerical methods are critical to solving today's engineering problems and advancing the frontiers of our current knowledge."

The project is funded by NSF's "Course, Curriculum and Laboratory Improvement" program. The grant is for three years and follows a \$74,961 grant that funded building of the prototype in 2002-2003.

"Each instructional module enhances instructor preparation and development and student educational experience and each is customized based on engineering major or computational method," says Kaw. "The Web modules are holistic. Modules review prerequisite mathematical background information, demonstrate the need for and use of numerical solutions through real-life examples, and combine text, graphics, interactive self-directed simulations and assessments."

According to Kaw, even during the development stage, the site has 3000 "hits" per month and is part of the National Science Digital Library.

The modules can be viewed at <http://numericalmethods.eng.usf.edu>.