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– David Manuel, senior lecturer in freshman calculus

## Students and teachers share digital notes and save time with the Sympodium interactive pen display

Angular buildings, designed by renowned Japanese architect Arata Isozaki and embellished with geometric shapes and flowing arches, rest on lush green lawns dotted with swaying palms in the desert just outside of Doha, Qatar. Known as Education City, this 2,500-acre site houses several high profile U.S. university satellite campuses, including Carnegie Mellon, Georgetown, Texas A&M, Virginia Commonwealth and Weill Cornell Medical College.

Education City is the flagship project of the Qatar Foundation for Education, Science and Community Development, an ambitious project to create a network of progressive education research and community interest centers. Only in its fourth year, Education City is already catering to residents from early childhood education through to post-graduate study. It is a unique Middle Eastern community built on knowledge and learning – a community Texas A&M University wanted to be a part of.

Specializing in chemical, petroleum, electrical and mechanical engineering programs, Texas A&M University at Qatar (TAMUQ) is modern, not only in its architectural appearance but

in its pedagogy also. Committed to fostering interactive and collaborative teaching and learning, TAMUQ equips all of its students with tablet PCs pre-loaded with Notebook™ and SynchronEyes® software, and all of its classrooms and lecture halls with the Sympodium® interactive pen display.

For senior lecturer of freshman calculus David Manuel, the introduction of the Sympodium interactive pen display into his teaching in September 2005 made it easy to save annotations made during lessons and to share those notes with students during his office hours.

"I teach in a large lecture hall, so a Notebook page can be easily projected from the Sympodium interactive pen display to a large screen for everyone to see," explains Manuel. "Students can download my course materials and write on them with their tablet PCs while I write on the Sympodium at the front."

Under the guidance of director of user services and instructional technology Ravi Kallianpur, TAMUQ's goal of creating a learning environment that is both interactive and collaborative has been realized with the Sympodium interactive pen display.

### Challenge

Make lecture halls interactive and collaborative

### SMART Solution

Sympodium interactive pen display

### Result

Teachers and students share digital notes and save time

*"The product is easy to implement, support, maintain and manage."*

– Ravi Kallianpur, director of user services and instructional technology

# Texas A&M University at Qatar

Case Study, Education City, Doha, Qatar

*"Now that teachers...use the Sympodium, our math classes are much easier to follow. The teacher can go through his notes with us without any problems, and since he posts them on-line, we can access them at any time during the day."*

*– Zuhaib Abdin,  
electrical  
engineering  
sophomore*



Senior lecturer of freshman calculus David Manuel uses the Sympodium interactive pen display in one of Texas A&M at Qatar's lecture theaters

"Teaching engineering courses requires a lot of interactivity by the teacher, including creating annotations, calculations, and writing out equations," Kallianpur explains. "Some of the faculty will save their lessons in Notebook software and then make it available to students. This is especially helpful in chemical engineering because they can show a picture and then write over it."

SMART's longevity in the education technology marketplace, and the durable, stylistic and well-integrated software and hardware of the Sympodium product has made implementation easy – and, Kallianpur adds, "The product is easy to implement, support, maintain and manage."

Kim Fernandes, a chemical engineering sophomore, says the introduction of the Sympodium interactive pen display to her lecture theaters has helped her to better understand challenging course work in a more interactive, hi-tech environment. Her professors, who used to handwrite awkwardly with a mouse, now use the Sympodium interactive pen display's tethered pen to easily write and draw over

PowerPoint® and Notebook files to explain and explore complex engineering concepts and illustrations with the students. "The professors can stand where they are and write or show on the PowerPoint slide itself, rather than show or write on the whiteboard," explains Fernandes. "They can explain and write the answers, which are then easily projected."

Electrical engineering sophomore Zuhaib Abdin says the benefits of having the interactive pen display in every class are obvious: no more messy chalkboards, a projection large enough to make even the most intricate of lessons easier to follow, and fewer books to carry because lessons and annotations are saved and downloadable.

"Now that teachers...use the Sympodium, our math classes are much easier to follow. The teacher can go through his notes with us without any problems, and since he posts them on-line, we can access them at any time during the day," says Abdin. "This has led to a great improvement in my ability to follow and understand the material in my classes."

## About SMART

SMART Technologies Inc. is both the industry pioneer and global market segment leader in easy-to-use interactive whiteboards and group collaboration tools. The award-winning SMART Board interactive whiteboard is the most widely installed product of its kind in the world. It enhances teacher productivity and improves student learning outcomes, and is used in more than 250,000 classrooms spanning more than 75 countries and every Local Authority in the UK. SMART products also include interactive pen displays, interactive digital signage, wireless slates and software. Using SMART products, groups can access and share the information they need to meet, teach, train and present. SMART's education customers include Oxford University (UK), Barnier Public School (Australia), University of Ottawa (Canada), United World College (Singapore), Stephen-Hawking-Schule Neckargemuend (Germany) and Harvard University (U.S.). For more information, visit [www.smarttech.com](http://www.smarttech.com).

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