

This Way to the Future

iPhone programming, from concept to code, prepares students for the world of mobile computing

When Matt White told the students in his introductory course in iPhone and iPad application development they were going to choose a problem and create a unique software application—an “app”—to solve it, Raphael Estrada knew right away what his project would be. An avid dancer and competitor in B-Boy dance competitions known as Dance Battles, Estrada believes the judges are sometimes biased in favor of people they know. “I wanted to develop a way to let everyone at the competition vote for the winners,” he said.

Estrada has an extensive background in Web design, but leapt at the chance to learn how to program in Apple’s development environment and use available open-source programming tools. Thus was born Estrada’s app, “Dance War.” It sets brackets for dance competitors, allows spectators to award points in multiple categories and compiles the results in democratic fashion. With Estrada’s app, everyone carrying an iPhone at a Dance Battle becomes a judge.

In only four years since Apple’s introduction of the iPhone, it and other smartphones have been eagerly taken up by hundreds of millions of users worldwide. And the relative ease of developing software for the iOS operating system used by the iPhone and iPad has generated a mammoth wave of creative programming, with over 350,000 apps now available.

It’s no wonder, then, that White’s course has attracted strong interest across the Bunker Hill Community College campuses. “The class is packed, and a lot of people have asked for it to be repeated. We’ll be offering it again in the fall semester,” says White, a former BHCC student now an adjunct professor at the College. White got his first taste of programming at the age of 12, using the HTML language to create Web pages. He went on to earn a degree in graphic design with an emphasis on interactive design, which involves database connectivity, use of the Java programming language and other programming skills.

White’s extensive hands-on experience and high-energy enthusiasm for his chosen field are evident at every moment his three-hour class is in session. At a Thursday evening class this spring, about a dozen students received a download from White on how to use the jQuery library of Java code to create visual effects, and went to work on the studio’s iMac computers, where their projects were taking shape. White spent most of his time one-on-one with students, answering questions, providing guidance, and sharing celebratory moments when a button click or visual effect worked as planned.

A full half of the semester is spent on concept development and scoping out their projects. Prior to beginning the coding process, the students got

additional advice on visual interface design in a guest lecture by a group of students from the Art Institute of Boston, where White also teaches. Then there’s the reality check, which is a major part of the learning process. “Everyone’s original ideas need to get simplified,” White explains. “You discover what apps are out there already, look at Apple’s guidelines, and understand why and how yours is different. We have one student who’s already working in app development, and he’s a great resource. He can look at an idea and say that it would take six months and \$200,000 to program. People go, ‘oooooh.’”

Yasmin Andre’s app, called VegOut, will direct vegans and vegetarians to restaurants with friendly menu options. Like Estrada, Andre (who previously studied the powerful C++ programming language), has firsthand knowledge of a problem. “A good friend of mine is vegan, and when we go out to eat, we find a lot of restaurants don’t cater to that community. An app could save a lot of driving around,” she explains. Her program is designed to draw on the Yelp database of restaurants, and also to allow users to view menus and easily call a restaurant for reservations.

To ensure broad compatibility, the class curriculum includes the porting of apps developed for the iPhone to other smartphone platforms, like Android and Blackberry. White also includes “crash courses” in JavaScript and other more advanced toolkits that provide exposure to what can be learned in the latter stages of the certificate program.

In an informal poll, about two-thirds of the students indicated that they’d like to have applications development as part of their professional life. White points out that even if programming itself isn’t part of a person’s job description, understanding the development process is extremely valuable.

“That’s why the class provides the whole picture, from concept to code,” says White, who notes that the curriculum is readily adaptable to different experience levels. “Even if you don’t end up with a perfect finished app, you learn a lot by going through the process of getting it into the simulator and figuring out how to make it work.”

If it sounds like rocket science at first, the app world soon becomes familiar to students. They pick it up quickly, and they have a lot of fun with it, says White. Plus, app development represents a genuine opportunity to do the world a service. Student projects this semester alone range from a program that teaches the alphabet to children, to a phone-based grade book for teachers, to an app for apps—an app that would help users sort through those 350,000 available apps to find ones they want. ■

Adjunct professor Matt White points to icons for apps created by students in the College’s new—and extremely popular—course in iPhone and iPad development.

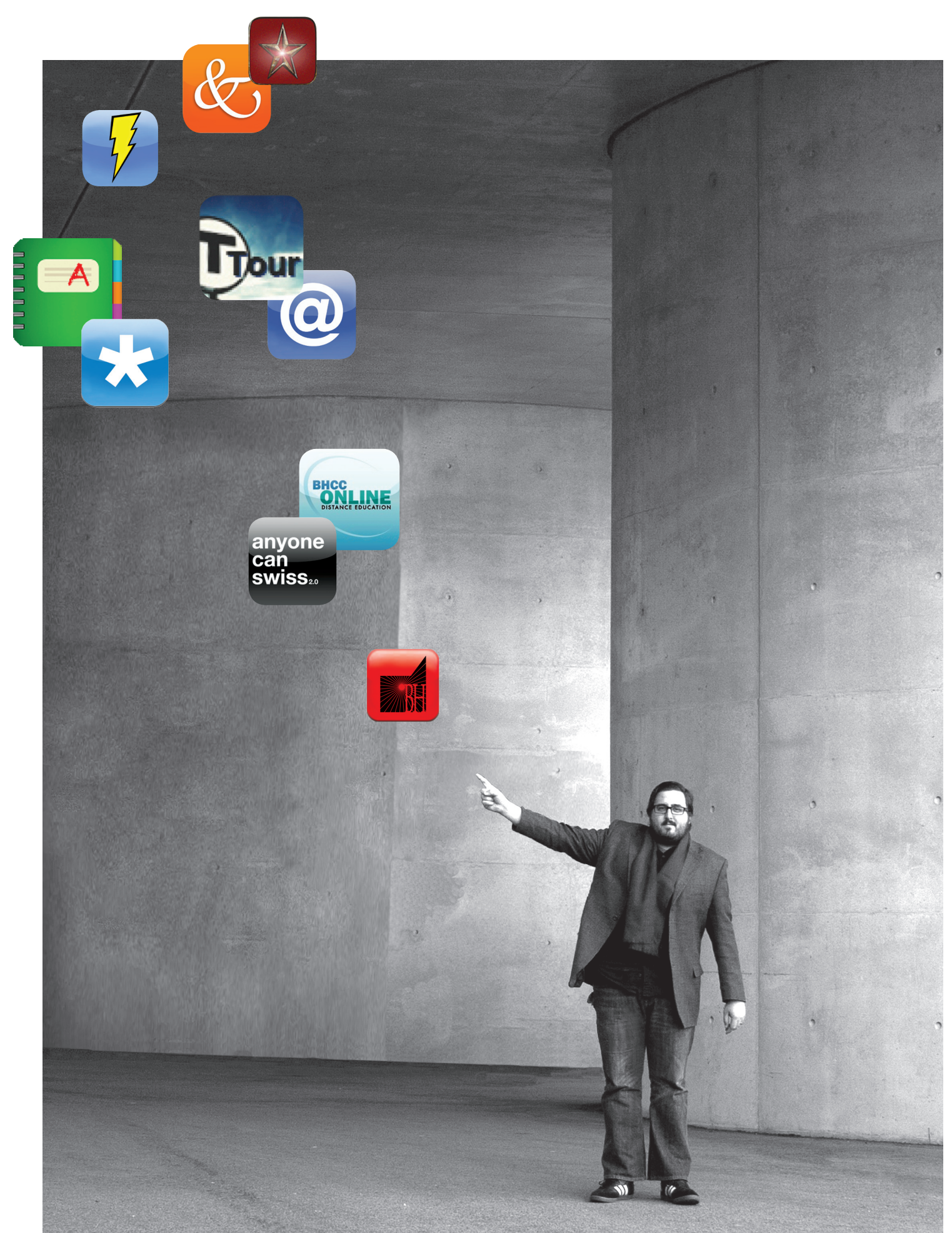


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