Students have developed software for clients like the Netter Center, the Nursing School and Wharton's IT department

By Tanvir Aslam · October 16, 2012, 11:27 pm

A pair of courses offered by the School of Engineering and Applied Science is aiming to create apps that benefit the larger Penn community.

The courses — Software Design and Engineering for undergraduate students and Software Engineering for graduate students — encourage and emulate industry practices by allowing students to create and maintain software for real-world clients.

SEAS lecturer Christian Murphy, who teaches both these courses and is also the PennApps Labs faculty supervisor, explained that the larger goal of the classes is to help students evolve from programmers to software engineers.

“It gives the students a feeling of ownership of the project beyond the grade,” Murphy said.

Some of the Penn “clients” for whom software has been developed include the Netter Center for Community Partnerships, the School of Nursing and the Wharton School's information technology department. While most of the apps are developed for Penn customers who request them, the class has also produced software for external groups, such as the Mütter Museum and Philadelphia’s Magic Gardens.

“The idea is, in the undergraduate course in the spring, the undergraduates create these projects, and in the fall graduate students continue them,” Murphy said.

Some of the popular apps from the course have included “Find-A-Doc”, which was created for the Nursing School and helps users find medical professionals based on their condition. In addition, “Roll Call” is an app created for the Netter Center that takes attendance at after-school programs for children and produces reports based on trends it notices.

In addition, some students in the course have been working with PennApps Labs on the ongoing development of Penn Course Review and Penn StudySpaces.

Students are graded in the course based on customer satisfaction with how the app ultimately turned out. Some projects, such as the Magic Gardens app, are even handed over to the customer, who involves their own staff to continue development.

The courses were designed with the help of engineers at Comcast, Google and Microsoft. Students say the courses have been of great help to them in securing employment at top software firms all over the country.

“I got my current job thanks to what I had learned in this course, as it helped me greatly in my interviews,” said Silvia Moreno, a computer science graduate from SEAS who now works as a software engineer at Comcast Interactive Media.

Former students of these courses are given the opportunity to come back as project managers who guide the students through the entire process, enforce deadlines and judge the quality of progress being made by the teams.

Murphy’s future plans for the courses involve improving the current undergraduate-graduate cycle of developing and maintaining products by working even more closely with clients.

In particular, he said there will be more collaboration with the Nursing School’s Innovation and Technology in Healthcare course — the students of which will serve as future customers in the next cycle based on the ideas generated in that course.

Computer and Information Technology graduate student Arpit Jain has enjoyed the opportunities presented by Murphy.

“Working with a real client and dealing with them first hand is a great experience which cannot be obtained in the classroom,” he said. “It gives you much needed ammunition for job interviews.”

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