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News

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Philadelphia University Student Team Wins U.S. Defense Department Chembio Suit Challenge

PHILADELPHIA, Jan. 23, 2017—A team of Philadelphia University (PhilaU) students won the top prize in a U.S. Department of Defense challenge to redesign protective chemical-biological suits for military troops. A second PhilaU team was a runner-up in the nationwide competition.

The Proof Challenge by the Joint Program Executive Office for Chemical and Biological Defense (JPEO-CBD) sought innovative ideas from the public to increase mobility, dexterity and tactility of these suits, allowing troops to complete their tasks, such as running and climbing, in a fast and comfortable manner.

The winning PhilaU team, which will share the \$55,000 top prize, focused on improving tactility and dexterity, interviewing Navy SEALs to better understand which areas in the current suit could benefit from upgrades. They will work with JPEO-CBD on next steps to bring their innovative concepts to reality.

The team included fashion merchandising and management alumni and current MBA students Madeline Haas and Nicole Raab, fashion design seniors Jess Roberts and Itohan Asemota; textile engineering junior Shana Kaplan; and textile materials technology junior Angela Villanueva.

“After looking into the current design and interviewing a group of Navy SEALs about their experiences with the suit, we outlined major aspects to improve,” Kaplan said. “Our final suit is a synthesis of original apparel design and integration of new technologies, with a focus on comfort and functionality.”

PhilaU’s runner-up team received \$5,000 for its project, which sought to improve the suit’s integration of arm-to-glove, leg-to-boot and hood-to-mask mechanisms and implemented technologies that allow users to maintain a comfortable temperature while protected from the environment. The team included fashion merchandising and management alumna and

current MBA student Chelsey Pyne; fashion design senior Keren Espina; and textile materials technology junior Devon Willard.

“The thinking, attention to detail and fresh ideas were astounding, exceeding what we expected,” said LeRoy Garey, Proof Challenge product manager. “This type of public collaboration is something we look forward to tapping into in the future—joining forces with the Americans we serve to help protect this country and our warfighters.”

Les Sztandera, professor of computer information systems and faculty lead for the project, said the University’s students are well-prepared to develop innovative solutions. “To be successful in today’s competitive economy, one needs to collaborate with others,” he said. “That’s what PhilaU students are all about.”

Other PhilaU faculty members participating in the project were Jonathan Spindel, director of engineering programs; Brian George, associate professor of engineering; Janet Brady, associate professor of materials technology; Marcia Weiss, director of textile design and Harold Neuman Textile Design Chair; Sheila Connelly, fashion design program director; Monica Lam, academic dean, School of Business Administration; Pielah Kim, assistant professor of fashion merchandising and management; Joseph Fritz, adjunct professor of business; Justin O’Pella, assistant dean, Kanbar College of Design, Engineering and Commerce; and John Venafro, fashion events coordinator. Michael Asada, a doctoral student in strategic leadership, advised students for the project.

Philadelphia University, founded in 1884, is a private university with 3,700 students enrolled in more than 70 undergraduate and graduate programs. As the model for professional university education, the University, through its award-winning Nexus Learning approach, prepares students to be leaders in their professions in an active, collaborative and real-world learning environment infused with the liberal arts. Philadelphia University includes the innovative Kanbar College of Design, Engineering and Commerce; the College of Architecture and the Built Environment; the College of Science, Health and the Liberal Arts and the School of Continuing and Professional Studies. For more information, go to www.PhilaU.edu.