Benjamin Ko, CEAS biomedical engineering senior, was recently named recipient of the American Society for Engineering Education’s 2012 National Co-Op Student of the Year Award. This award is a national recognition of his outstanding and intensive co-op with AtriCure, Inc.

Ko has done all three of his co-op rotations at AtriCure, Inc., a company that develops, manufactures and sells surgical ablation systems. Through his experience, Ko has been able to apply what he learns in the classroom as a student in the CEAS School of Energy, Environmental, Biological, and Medical Engineering (SEEBME) as well as gaining a valuable skill-set of technical expertise and interpersonal skills through his collaboration with design engineers.

During his first round of co-op work at AtriCure, Ko worked on a product development team making medical devices for cardiac surgery. He stated, “I was really able to see what my contributions were. It is a really important step for a student worker to take some ownership in the projects and see that he or she is making a difference and see that the engineers actually value you as a member of their team.”

By his second co-op rotation, Ko had made such an impression on the company that he was offered to lead the training of the US sales force on AtriCure’s new cryogenic product. “Ben was one of only two engineers who conducted sales training and who participated in the release system validation studies around the US,” said Christopher Park, AtriCure's director of engineering (2004-2012) and Ben’s supervisor. “Ben was able to communicate both the technical design aspect of the medical device and the science behind its functional operation in a manner such that even a non-technical sales person was able to comprehend and take the message forward.”

Realizing Ko’s natural leadership abilities and his success in training the US sales team, the company had him train the European sales team. This opportunity made him a global liaison for AtriCure, as he would travel overseas several times for the company. “He is the only co-op student at AtriCure to have ventured internationally because of his accomplishments,” said Park.
“Ben also took the lead in performing field hardware and software upgrades of the cryogenic ablation systems, both domestically and internationally.”

Also within this co-op rotation, Ko had the chance to be part of an AtriCure User Preference Evaluation study. “I’ve been in 30 to 40 open heart surgeries in the past couple years,” said Ben. “Legally, we as engineers and sales reps can’t touch the patient. We can’t ‘scrub in’ but we do get sterile, put on the scrubs and face mask, and then either stand behind the surgeon, across from the surgeon or at the head of the patient. There were five to 10 surgeries where I stood at the head of the patient and I got to look into their chest cavity and see the beating heart and see where the doctors were making incisions to replace the mitral valve. It was fascinating – absolutely amazing – to see a beating heart.”

Ko’s AtriCure supervisor and mentor left the company a few weeks before he started his last co-op round. As a result, he adopted a partial managerial role and led a small medical device team. Ko proved his ability to lead a team and positively impact others during this experience. This comes as no surprise to Ko’s advisor and personal mentor, Jeffrey D. Johnson, PhD, SEEBME associate professor educator, and director of SEEBME undergraduate studies.

Johnson said, “Ben is a template for success. He is an exceptional student who is not only highly motivated but one who has a strong will to serve his community. All of these qualities make Ben a leader within the department, the college, the university, and the company.”

In addition to his co-op work with AtriCure, Ko continually excels in the rigorous biomedical engineering program with a 3.92 GPA and was just named the CEAS Engineer of the Month for December. His ambition reaches into the community, as he is a math and reading tutor to elementary students, the president of the UC chapter of Biomedical Engineering Society (a previously dormant student organization which Ko helped revitalize), and an active member of the Engineering Tribunal student organization. Additionally, Ko now represents students on the SEEBME curriculum committee.

Looking ahead, Ko hopes to work in industry creating medical devices as a biomedical engineer but also plans on applying to a program at John Hopkins graduate school.

“There’s no doubt in my mind that Ben will be successful at whatever he chooses to do. He has truly shaped the next
generation of CEAS undergraduate students and has built a strong foundation for the school and the community to carry on and strengthen as they go. I can easily picture him in a leadership position in industry, the government, medicine, or even public service. Ben’s strong desire to serve his school and outreach to the community will have a lasting impact on UC and Cincinnati. He’s already been a tremendous benefit to UC as a student, and there is no question in my mind he will continue to be a benefit to UC after he graduates.”

Founded in 1893, the American Society for Engineering Education is a nonprofit organization of individuals and institutions committed to furthering education in engineering and engineering technology. It accomplishes this mission by promoting excellence in instruction, research, public service, and practice; exercising worldwide leadership; fostering the technological education of society; and providing quality products and services to members.

In pursuit of academic excellence, ASEE develops policies and programs that enhance professional opportunities for engineering faculty members, and promotes activities that support increased student enrollments in engineering and engineering technology colleges and universities. Strong communication and collaboration with national and international organizations further advances ASEE's mission.