

## Sustainability Institute

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### Students connect classroom learning to real-world change

May 15, 2016 – In the quiet of early January on campus, a group of undergraduate students got a head start wrestling with one of the weightiest challenges their generation will face: how to achieve sustainable growth in a globalized society and a changing climate.

The 30 students cut short their winter break to attend the first session offered by the college's [Sustainability Institute](#)<sup>[1]</sup>. During the 10-day professional development training, the young leaders gained practical, hands-on experience with the systemic dilemmas they hope to take on in their careers.

"Sustainability is often tossed around as a buzzword, but it's not just a line on my resume anymore," said Carter Gresham, a senior majoring in landscape architecture. "This training helped me apply sustainability to my design background and ask how we can create buildings that can be retrofitted to be used for another 50 years."

The students participated in more than 60 hours of workshops and tackled case study challenges. Videoconferences and in-person sessions with sustainability professionals in government, the private sector, and nonprofit organizations revealed a variety of potential career paths.

Students representing 20 majors across all seven academic colleges attended the training, which is open to undergraduates in any major. The interdisciplinary curriculum familiarized students in the arts, humanities, and sciences with the fundamentals of the marketplace and introduced business majors to a broader picture of corporate responsibility.

"Most of my classes focus on how to move up the corporate ladder and maximize profit," said Diana McDermott, a junior economics major. "The Sustainability Institute opened my eyes to the fact that corporate responsibility isn't just the drive to make as much profit as possible; it's the responsibility to create a better world."

"I'm a hardcore scientist, so I had no idea about business practices," said Naomi Rodman, a senior majoring in biochemistry and chemistry. "The institute showed me what interactions in a professional environment are supposed to be like."

"Sustainability is bigger than any one academic discipline," said Dean Paul Winistorfer. "With our college focus on advancing the science of sustainability, we've been considering the creation of such a student experience for several years and have finally brought it to reality. We've put real-world content and context into this experience for students. The Sustainability Institute can be a signature program for Virginia Tech."

Angie De Soto, the institute's director, spent 18 months consulting with more than 100 industry experts to determine which skills and concepts were most important for graduates entering the workforce to master. Using their insight, she developed the program's curriculum in collaboration with nine faculty fellows from across campus.

The program builds on the concepts students learn in their discipline-based courses. "The institute is successful because of the great content Virginia Tech's faculty already teach in the classroom," De Soto

said. "Our goal is to connect sustainable systems to their fields of study and expose them to what these programs look like in the workplace."

"You can work on sustainability in any role at any organization," she continued. "It's how you approach and solve problems; it's not a word in your title. Young professionals who can problem solve with a 'sustainability lens' and explain the business case for doing so are highly attractive to employers."

The curriculum emphasizes what graduates can accomplish in entry-level positions because most "sustainability" jobs require many years of experience. Each company has its own approach to integrating sustainability, De Soto said, so new employees must examine how their organization operates and what issues are most material to them. Then they can frame proposals based on those priorities.

"My biggest takeaway was learning new language to make what's important to me seem important to people who don't have the same values," said Kylie Campbell, a sophomore majoring in water: resources, policy, and management. "I could spend as much time as I want doing research, but if I can't communicate what I'm learning and translate that into change, then it's not useful."

After a full week of training in Blacksburg, the participants traveled to Richmond for three days of presentations, problem-solving exercises, and networking with nonprofit agencies and corporations, including [Trane](#)<sup>[2]</sup>, [SolarMill](#)<sup>[3]</sup>, [Keep Virginia Beautiful](#)<sup>[4]</sup>, and [Moseley Architects](#)<sup>[5]</sup>. There, students grappled with real-world challenges and presented their ideas to panels of sustainability professionals for critique.

"For a week, we'd been working on public speaking and formulating the best solutions to sustainability problems, and then we were being asked to do it in front of people well into their careers, so there was pressure," said Stephen Hong, a senior materials science and engineering major. "But I felt very prepared. It was valuable to be able to attack a problem immediately with people who were complete strangers just eight days prior."

Each participant is being paired with a mentor outside Virginia Tech to continue his or her professional development, and several students will work in paid internships with the institute's partner organizations. The program was offered free to students owing to generous donations from Trane, [Luck Companies](#)<sup>[6]</sup>, and Virginia Tech alumnus Jeff Rudd. Sessions will be offered each summer and winter; the next session is scheduled for Aug. 8-19.

"As a design student, I'm part of an isolated group, so to be welcomed into this diverse program and work across disciplines was one of the more phenomenal experiences I've had at Virginia Tech," Gresham said. "I cannot stress enough how much I learned."

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The first training session offered by the Sustainability Institute included students from 20 different majors across campus.

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- [2]. <http://www.trane.com/Index.aspx>
- [3]. <https://www.windstream-inc.com/products/solarmill>
- [4]. <http://keepvirginiabeautiful.org>
- [5]. <http://www.moseleyarchitects.com>
- [6]. <http://www.luckcompanies.com>
- [7]. [http://www.cnre.vt.edu/magazine/articles/201605/cover-front/L\\_solarmill.jpg](http://www.cnre.vt.edu/magazine/articles/201605/cover-front/L_solarmill.jpg)
- [8]. [http://www.cnre.vt.edu/magazine/articles/201605/cover-front/L\\_si-material-activity.jpg](http://www.cnre.vt.edu/magazine/articles/201605/cover-front/L_si-material-activity.jpg)