

# THE BALANCING ACT

Alyssa Cartwright engineered a rich MIT experience that included coursework, research, music — and more.

By Anne Stuart | EECS

**A**lyssa Cartwright's first order of business at MIT didn't involve science or technology. "One of the biggest things I had to do when I got here was learn to prioritize," says Cartwright, a member of the class of 2017. "I had to learn to do my work in an efficient manner to have time left for what was important to me."

Apparently, she aced that lesson, managing to balance her studies in electrical science and engineering (6-1) with other activities that included co-chairing MIT's largest student-run research conference and serving on an elite group that meets regularly with the leadership of the Department of Electrical Engineering and Computer Science (EECS). Along the way, she spent a summer conducting research in a National Science Foundation-funded program at Vanderbilt University in Nashville, Tenn., collected two EECS awards for her Undergraduate Research Opportunities Program (UROP) and SuperUROP projects, served as a teaching assistant — and still found time to play clarinet in the MIT Symphony Orchestra all four years.

Cartwright, who is from Williamsville, N.Y., just outside Buffalo, jokes that she grew up with both sides of Course 6: her father is an electrical engineer; her mother is a system administrator. "From an early age, I thought engineering was a very cool field," she recalls.

Music has also long been part of her life. She began playing the clarinet in the fourth grade, which led not only to a spot in MIT's orchestra, but to a minor in music as well. "Music is a very important part of my personality and my worldview and how I approach things," she says. "It's really important to me to have a creative outlet."

Cartwright found her research focus in 2015, when she was among 17 students from throughout the United States who participated in Research Experience for Undergraduates (REU) at Vanderbilt. Her project involved designing, simulating, and testing photonic crystals for biosensing. "That was my first



Serving on the EECS student advisory committee was just one of Alyssa Cartwright's activities at MIT.

experience with optics and biology, and that's where I learned that I wanted to focus in that area," she says. She also loved collaborating with her peers at Vanderbilt: "You live with the other students who are doing the program; you go to the labs and do your work and talk about it later," she recalls. "It's like a mini-graduate school."

In the fall of 2017, Cartwright will start graduate school for real, working toward a PhD in electrical engineering at Stanford University. She plans on an academic career, but isn't sure yet where that will take her.

Meanwhile, she offers this recommendation to future EECS students: "Get involved with research as soon as you can — even if you feel you are wildly underqualified," she says. "The faculty are invested in their students. If you put your time into the experiences, they'll put in the time to help you." And, as a member of two engineering honor societies, she acknowledges that academics are crucial — but only part of the overall MIT picture. "Try not to stress too much about classes," she advises. "There are other parts of life here."

*Editor's Note: In May 2017, EECS recognized Alyssa Cartwright's contributions with a Paul L. Penfield Student Service Award.* 🏆