## THE

WOOD

National woodturning award-winner Justin Fiaschetti (ENG'21) says his engineering degree complements his art

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WORKER



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hen Justin Fiaschetti arrives at his woodshop, all is quiet, all is clean. It doesn't last. The noise starts as he switches the jointer—used to flatten

the edge of a board—to "on," and its cutting head whirls furiously. With his right hand, Fiaschetti (ENG'21) feeds the machine a four-foot-long piece of rich red sapele mahogany, an African hardwood, and a sweet cedar-like scent wafts upward.

The wood is one of about 40 pieces he will use to build a desk inspired by the design of Boston's cable-stayed Zakim Bridge. Fiaschetti's sketch shows two curved desktop legs with suspension cables supporting the tabletop. It took about three months from design to build.

The 19-year-old freshman, who is studying mechanical engineering, with a concentration in aerospace engineering, has built rocking chairs, bowls, vases, coffee tables, and baseball bats, and not one of them is simple. Far from it. His baseball bat, for example, was made out of 1,283 pieces of walnut, ash, and yellowheart wood. "I would say my style is more of a modern take on classical furniture," he says. "It combines rustic and modern pieces together."

Fiaschetti first entered a woodshop as a high school freshman. He credits his woodshop teacher at Delaware Valley Regional High School in New Jersey with the initial inspiration. "It was his enthusiasm for the craft," he says. "He was ready to work with you, give you tips, and he didn't stop us or slow us down." Fiaschetti says he learned many of the more technical and advanced techniques from YouTube videos.

In his senior year, Fiaschetti won Best in Show in the High School Division at the American Association of Woodturners competition with a 555-piece African-motif vase. Woodturning, he explains, is a type of woodworking done largely with a lathe, a rotating tool that spins a piece of wood on an axis, allowing the worker to shape it with carving tools.

When he's home in New Jersey, Fiaschetti works in the family garage, but at BU, he takes advantage



Justin Fiaschetti works in ENG's carpentry shop, where he created a desk (facing page, bottom right) inspired by the design of Boston's cable-stayed Zakim Bridge. He also builds rocking chairs, bowls, bats, and vases, some with more than 1,000 pieces of wood.

of the College of Engineering's Engineering Product Innovation Center carpentry shop at 750 Commonwealth Ave. He spends about six hours a week there, and he usually has the place to himself. While he works, he listens to podcasts like NPR's *How I Built This with Guy Raz*.

Fellow woodworker Anna Thornton, an ENG professor of the practice of mechanical engineering, says she enjoys watching the next generation of artisans developing their talent. "Justin is able to execute his aesthetic sense with great technique," she says. "Most important, he brings core engineering skills to both the structural and manufacturing design of his pieces."

Fiaschetti's new builds always start with a hand sketch. Next, he transfers the drawing to CAD drafting software, which allows him to measure the parts of his project, from angles to an arc's









radius. He then prints out a full-size pattern. When making a cut, he relies on sound as much as sight. "It speeds up the process," he says. "I can back off of a cut if there is a lot of vibration, because that indicates you're not getting a consistent cut." Finally, he assembles the pieces, sands the project, and applies a finish.

"The desk will be sanded using 400-grit paper and finished with clear coats," he says. "I don't like using stains. I choose the wood based on the color I want the piece to be." In the end, he says, the sapele wood will reflect light in a really cool way.

Fiaschetti photographs and films his work to post on Instagram, where he has almost 13,000 followers, and on his YouTube channel, which has nearly 10,000 subscribers. His instructions are not for beginners. In one 10-minute video, he explains how to make a 1,070-piece "tornado"

bowl using woodturning techniques and 11 kinds of wood.

He's earned about \$5,000 from sales of his work (through craft shows and his website, www.FiaschettiWoodworking.com), ranging from an \$18 segmented salt dish to a \$250 end table with a quilted maple top and a walnut base, and his YouTube ad money. "I don't really run it as a business," he says. "If I did, I would just make \$15 bowls."

"Woodworking is a good way to develop my design skills and learn about structural integrity," says Fiaschetti, who is thinking about enrolling in the North End's 137-year-old North Bennet Street School for furniture making to master his art. "I want to be a full-time engineer and a parttime woodworker. I apply many of the same skills to both."

**ONLINE**: Watch a video of JustinFiaschettibuilding adesk from  $start\ to$ finish at bu.edu/ bostonia.