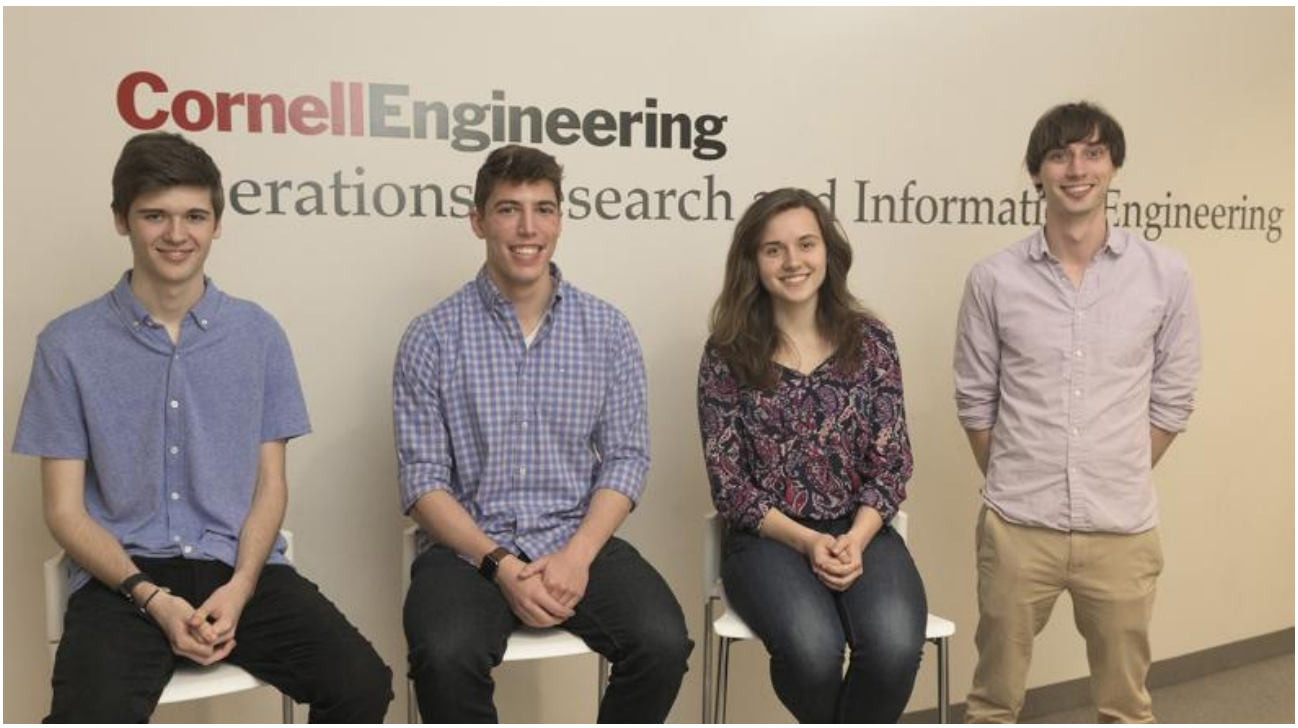
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ORIE students help others grow & find success

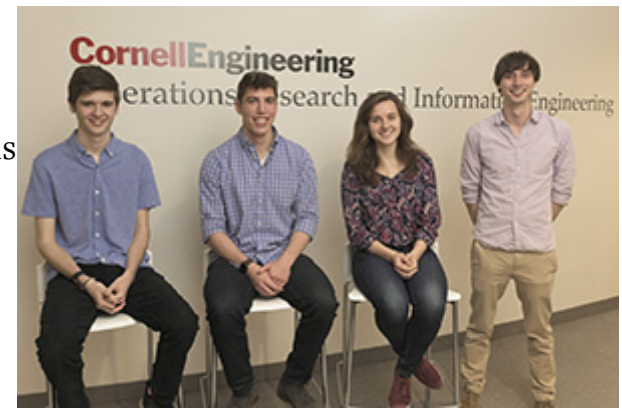


March 20, 2020| By: Olivia M. Hall

"When you offer them the combination of stimulating material, plus people who care, it gives them a lifeline to grab onto."

— Gary Fine
Program Director
Durland Alternatives Library

As Andrew Daw first approached the gates of the Cayuga Correctional Facility in Moravia, N.Y. in January 2019, he felt a bit daunted. This was, after all, his first experience with prison. But unlike the inmates he was about to meet, the Cornell doctoral student was here voluntarily and free to leave a few hours later. He had come to teach introductory college-level math to a classroom of some of the most grateful students he would ever encounter.



Cooper McGuire '22, Jack Kulas '22, Cassandra Heine '22, and Sam Gutekunst Ph.D. '20 developed a 60-page mini-textbook, "Winning with Math", with support from an Engaged Cornell graduate student grant.

Daw is one of several ORIE students who have been reaching out beyond the comforts of campus to share lessons in mathematics and critical thinking with prisoners in the region and throughout the United States. While Daw has been visiting nearby correctional facilities through the Cornell Prison Education Program (CPEP), fellow fifth-year Ph.D. student Sam Gutekunst has spent the past two semesters developing a math textbook for Prisoner Express (PE), a mail-based program also housed at the university.

"People in prison are bored, lonely, and think they're going crazy, they feel like they have nothing of worth to do," said Gary Fine, program director at Durland Alternatives Library (DAL) and founder of PE. "When you offer them the combination of

stimulating material, plus people who care, it gives them a lifeline to grab onto."

Fine emphasized that prisoners represent society's full range of intellectual abilities and education, from early learners to individuals asking for college-level physics textbooks. However, many find math especially challenging.

Students such as Daw and Gutekunst are happy to help. "Education is one of our best tools for self-improvement," Daw explained. "I've been fortunate to have had incredible access to learning throughout my life, and that's led to me finding a subject I'm passionate about. I'm lucky to get to share that with others."

Daw joined CPEP—whose mission includes providing high-quality higher education in New York State Prisons and helping to improve prisoners' lives and their chances for re-entry into civic life—after completing his A exam (which is required of any graduate student teachers). His Contemporary Mathematics course is one of about a dozen options offered every semester by a variety of Cornell faculty and graduate students, supported by undergraduate teaching assistants. Their students—prisoners in four regional correctional facilities—may earn liberal arts credits towards a Certificate in Liberal Arts from Cornell or a SUNY Associate in Arts degree.

Over two semesters, Daw has taught more than two dozen men, ranging from his own age to older than his parents. "For many of these students, this is their first math class in a long time and often one of the key remaining requirements for their degree," he said. Daw's approach to conveying the building blocks of quantitative reasoning—such as set theory, geometry, probability, and statistics—in the prison classroom is much the same as on campus. "The primary difference, though, is that my interaction with the class is only through the weekly three-hour lecture period," he said. "There are no office hours, no Blackboard, no email. The challenge in teaching is being prepared for anything that could happen that week, because otherwise it has to wait a week more."

Working within such constraints has made positive outcomes all the more meaningful. "I think the most rewarding part is watching these students encourage one another while working on problems at the board. You both get to see the joy someone

experiences when figuring something out and to witness a person's peers actively lift him up and recognize him for an achievement," Daw said.″ In general, these are some of the most engaged students I've ever been around, and that's a sentiment that's quite common among CPEP instructors. Seeing their fear about learning math transition to an open excitement for solving problems is a special experience I'll carry with me from my time at Cornell."

Daw's students, however, are a rarity. In the United States, few prisoners have access to post-secondary education programs such as CPEP. According to a report titled "Investing in Futures" and released earlier this year by the Vera Institute of Justice and the Georgetown Center on Poverty and Inequality, in 2014 (the most recent data available) only nine percent of prisoners earned a college or trade school certificate while incarcerated, and fewer than half of prisoners completed any education program at all.

In fact, DAL director Fine learned that many prisoners lack access to even more basic resources, such as books, and may experience long days of isolation. When a prisoner wrote a letter 15 years ago requesting reading materials, Fine sent out his first shipment of books—and Prisoner Express was born. Today the volunteer-based program supplies some 4000 prisoners across the country with books, a newsletter of each other's writings and art, a journal program, and distance learning courses.

PE's newest offering is Gutekunst's "Winning with Math." Nominally a math course, it is designed to teach broader principles of abstract reasoning and critical thinking by examining how groups of people aggregate preferences to make decisions—specifically, how different methods of voting, allocating resources to states, and drawing political districts can lead to different outcomes, and how tools from Operations Research help us decide what methods to use. "This is a topic that fits nicely into operations research, because the math doesn't have a high barrier to entry, but you can see how seemingly small choices can have profound impacts," said Gutekunst. "Sometimes they can literally shape the balance of power, but they're also relevant any time a group of people comes together to make decisions—from a college admissions committee, to a board of directors, to how Netflix recommends movies."

Gutekunst developed the 60-page mini-textbook with support from an Engaged Cornell graduate student grant and three undergraduates he had taught previously in an introductory operations research class, then-first-years Jack Kulas ’22, Cooper McGuire ’22, and Cassandra Heine ’22. Once the lessons ship to some 600 inmates by the end of the year, the team hopes its prisoner students will respond to some of the included open-ended questions and engage in follow-up correspondence. “It will be extremely rewarding to get answers back from inmates, to see how they felt about the program, and also to see how they’re applying the ideas to their own lives,” Gutekunst said. He expects additional useful data from a 1,000-person survey the team designed to improve PE’s operations and document its impact.

For Gutekunst, PE’s positive effects reach beyond prison. “One of the things that’s been really cool about working on this project is the potential for it to have a formative impact on my undergraduate students’ trajectories,” he said. “The project lets them explore operations research ideas they might never have heard of before, helps them develop as technical writers, and lets them—as freshman—share what they’ve learned with over 600 readers.”

His students, in turn, appreciate what they have gained from this work. “My involvement with the project has made me more conscious and thankful for my own education and more cognizant that other people may not enjoy the same opportunities and privileges I have had,” said ORIE major Kulas, who will be presenting a poster about this work at the Joint Mathematics Meetings in January with his teammates. “I definitely want to continue working on projects where I can give back and help motivate others to find their full potential. At the beginning of my freshman year, I could not even imagine working on a project this impactful under such a willing and helpful mentor.”

And if past experience—and data from the “Investing in Futures” report—is any guide, the educational opportunities Gutekunst, Daw, and others create can profoundly alter the outlook and post-incarceration lives of prisoners who receive them. “They start to realize, ‘I’m not crazy, prison’s a crazy-making place,” Fine said. “It gives them hope that there’s a world out there for them.”