



RIT | PRESIDENT'S REPORT 2024



RIT

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Rochester Institute of Technology

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FROM THE PRESIDENT

Perpetually creating the future... and taking a leading role on the global stage

"I believe—with this new campus as a launching pad—that what we have seen in the past of growth and service is a bare beginning. I might liken it to the very simple airplanes of 1908, vintage in comparison to the spaceships of today. I predict to everyone here that this institution will enter a new, exciting, and challenging era."

RIT President Mark Ellingson at the 1968 dedication of the new university campus



When RIT President Mark Ellingson moved the campus from downtown Rochester to farmland in the nearby town of Henrietta in 1968, it was

visionary. But it was also a calculated risk. Ellingson, whose presidency extended an astounding 33 years (1936-1969), was confident RIT's academic leadership and reputation would progress "at a constant accelerated pace" with his anticipation of a more deeply connected world.

Today, RIT is taking a leading role on the global stage. A few examples:

- A record total enrollment of more than 20,500—including 3,000 international students from 103 countries at our main campus.
- A record high of more than 3,600 students at our international campuses in China, Croatia, Dubai, and Kosovo. This is in addition to our 90-plus active global partnerships with projects involving artificial intelligence, cybersecurity, the arts, and more.
- One of six U.S. universities named as part of an international U.S.-Japan partnership that was announced at the G7 Summit in Japan. This effort is being led by Micron Corp. with an objective to focus on improving competitiveness in computer chip design, development, and manufacturing in the United States.
- A member of the New York Climate Exchange on Governors Island, a historic site in New York City Harbor, which will be the home to a new world-leading climate solutions center.

Today's RIT is about curiosity and joy for our students and faculty. It's also about creativity and passion, which lead to discovery, innovation, and awe. Our students are thriving by competing against the best from across the world and bringing home top prizes at national and international collegiate competitions.

They are thriving by landing co-ops, internships, and other forms of experiential learning to find and develop their passions. And they are thriving by joining our ranks of more than 148,000 alumni with rewarding careers and living fulfilling lives beyond the workday as global citizens.

Our history reflects that RIT is accustomed to audacious goals with calculated risks. We engineered the largest project in our history—since the 1968 downtown move—last fall by opening the doors to the Student Hall for Exploration and Development (SHED).

Here, we are transforming RIT by building places and spaces for thinkers, creators, makers, and performers unlike any other university in the nation. We also recently broke ground for a new research building and a music performance theater to turn more big ideas and dreams into reality.

We are ready to write our next chapter by embracing challenges that bring out the best in RIT.

Mark Ellingson was right. We are perpetually creating the future.

Yours truly,

David C. Munson Jr., President
munson@rit.edu

12

Curiosity and Joy

- Maker community
- Art Experience
- Student exploration
- Active learning

2

Creativity and Passion

- Esports community
- Performing artists
- RIT Dubai's Racing Tigers
- International students
- Business innovation



22

Discovery and Awe

- Experiential learning
- Growing research
- Meet four researchers
- New Ph.D.s



\$94
million **R2**
158
1 of **6**

32

By the Numbers

- Enrollment
- Giving
- Research

CREATIVITY AND PASSION

RIT is where students find their passion and unleash their creative potential.

Lauren Wells, a studio arts and painting student, and her classmates put their creativity to the test by creating **wearable sculptures** during a one-week design challenge.





Overwatch player Eve Sullivan, left, has found a passionate community with RIT Esports, the university's competitive video game group. RIT Esports has won eight national championships.

Esports teams help students embrace their passions



Overwatch player Eve Sullivan loves the climb to become the best.

“Every victory is knowing you outperformed the opponent, and every defeat is an opportunity to learn and come back better the next time,” said Sullivan, a fourth-year web and mobile computing student. “But that’s only the surface level of why I play esports. I stay because of the great friends and connections I’ve made.”

Sullivan has three matches a week and spends four nights practicing as part of RIT’s *Overwatch* esports team. The practice sessions can vary from happy-go-lucky to serious, as the team analyzes plays and looks for strategies to improve its game.

Sullivan has also had success on the national stage, playing in Blizzard’s *Calling All Heroes* tournament created specifically for marginalized genders.

“While education had come first, esports was one of the larger reasons I applied to RIT,” said Sullivan. “In high school, I made a lot of friends through esports and I’m passionate about it. I wanted to make sure I was in a place where there were other people with that same passion.”

RIT has one of the largest and best collegiate esports programs in the nation. With around 250 players and more than 2,300 community members, RIT Esports is bigger than many college athletics programs.

RIT Esports currently competes in 17 video games, including *Rocket League*, *Hearthstone*, and *OSU!* Due to the excess of talent at the university, there are 36 different teams and nine Academy teams.

“We introduced Academy teams to help provide newer/less experienced players with a competitive

experience along with coaching them to help them become better players,” said Sam Burgoyne, a fourth-year game design and development student and president of RIT Esports.

RIT Esports has brought home eight national championships, and students have won more than \$100,000 in prizes.

Playing competitively isn’t the only way for RIT students to get involved with esports. The teams have coaches and managers, while elected student administrators run the club. There are also support teams that do everything from designing the jerseys to running events. A broadcasting team produces live-streamed matches, and students take over the microphone to cast each game.

The club even has a student-led development team that creates tools to make managing teams easier and to provide teams with a competitive edge—gathering publicly available stats on opposing teams.

This academic year, a new squad playing the indie game *Omega Strikers* has been climbing the ranks in a growing collegiate competitive scene. RIT’s *Counter Strike 2* team also won the 2023 National Association of Collegiate Esports varsity premier championship.

In the future, Sullivan hopes to join many of the other RIT alumni who have started careers in the esports industry.

“I hope to be able to combine my two passions and work on websites and apps for esports organizations,” said Sullivan. “I think websites are a lot of people’s first introduction to something, and I want to make websites that bring people into the awesome world of esports.”

Scott Bureau '11, '16 MBA

Logan Mui, center, a second-year computer science major, says being part of Eight Beat Measure is a blessing.

Eight Beat Measure is one of 44 student clubs that provides performing arts opportunities for students.

Scott Hamilton

Performing arts options tip scales in RIT's favor

A month into her first semester, Julia Vieira Reis was invited to perform in downtown Rochester during the city's Fringe Festival with The Jive, an RIT jazz combo that she had joined.

Vieira Reis is a first-year industrial and systems engineering major from Manchester, Conn. The performing opportunities on campus were a big reason she applied to RIT.

"I've always wanted to go into engineering, but music was also a high priority for me," she said. "I'm definitely not disappointed with all the opportunities here. Everyone has welcomed me with open arms."

Vieira Reis was one of 515 incoming students this academic year who received a performing arts scholarship, which were created to enable musicians, dancers, actors, and even students with experience in technical theater to continue to pursue their passion for

performance while at RIT. To date, some 1,800 students have received scholarships in the five years they have been available.

Vieira Reis has been playing double bass for nearly 10 years. "I was 8 or 9 years old, and no one else was playing the double bass. It was kind of intimidating when your instrument is taller than you."

Her bass is made of spruce, with ebony on the fingerboard. She named it Victoria and has a "bass boogey," a set of wheels that lets her escort Victoria easily around campus.

She was classically trained and began to explore jazz in high school. She attended the prestigious Litchfield Music Camp during her summers and joined community symphonies near her home.

"Music became more than a hobby for me; it is a large passion in my life," she said. "I was active with robotics at school, but I would make time

for jazz jams and meet a lot of local cats there."

RIT caught her eye for its excellence in engineering, robotics, and the fact there are many opportunities for her to continue playing jazz on and off campus. RIT President David Munson wants RIT to be the leading school in the country for performing arts non-majors.

The opening of the SHED last fall offers more practice space and venues, and a 750-seat music performance theater is being built, with an opening planned for 2025.

RIT's National Technical Institute for the Deaf and the College of Liberal Arts and its School of Performing Arts offer private lessons, academic and creative courses, productions, and ensembles to join. There are also 44 student clubs that provide opportunities for students to dance, sing, play an instrument, engage in theater, do improv, and more.

Within two weeks of coming to RIT, Logan Mui, a second-year computer science major from Smithtown, N.Y., joined Eight Beat Measure, one of seven a cappella groups.

He sang in a choir in his middle school, but that interest waned in high school.

When he arrived at RIT, he saw fliers announcing auditions for a cappella groups. "I thought, 'This is pretty cool.' Coming back to that now, singing and performing with other people that want to do it just as badly as you do, it's amazing. It's a blessing."

Mui rehearses four times a week with the group. What does he get in return for his hard work?

"I'm normally very happy, especially come performance time," he said. "It's like, we made this. We all sound great. It's just such a beautiful thing."

Greg Livadas



First-year industrial and systems engineering student **Julia Vieira Reis** performs with The Jive, an RIT jazz combo. Music, she says, is her passion.

Sarkis Milan, center, a fifth-year mechanical engineering major, designed and piloted RIT Dubai's Racing Tigers boat.

Racing Tigers compete on world stage

Members of RIT Dubai's Racing Tigers take a life-long passion in sailing, pair it with academic knowledge, and then compete on the world stage, all while working to create a sustainable future with clean-energy technologies.

That includes Sarkis Milan, a fifth-year mechanical engineering major from Dubai, who has always had a passion for building boats.

"I used to collect water jugs and tie them to thrown-out cabinets to make a small boat," said Milan.

Before he decided on a college, Milan visited RIT Dubai and won an industrial engineering competition that earned him a scholarship. After that, RIT seemed like the right fit for him.

RIT Dubai, which was established in 2008, is one of five global campuses.

Others are RIT Croatia (Dubrovnik and Zagreb), RIT Kosovo, and RIT China. The sail racing team is one of more than 20 active clubs on the RIT Dubai campus.

Milan was responsible for designing last year's boat along with manufacturing the parts. The craft was tested at the annual Monaco Energy Boat Challenge, where teams from around the world compete with alternative boat propulsion systems in tests



of endurance, speed, and maneuverability. Milan was tasked with driving the boat during the four-hour endurance competition on the Mediterranean Sea.

“I felt truly connected with this machine I built,” said Milan. “I designed every single component and put it together with my own hands. Driving wasn’t something I had to even think about; it felt like an extension of my body.”

The Sailing Tigers placed fifth out of 16 teams at the 2023 competition, following a second-place finish in 2022.

In 2023, the team struggled with battery issues during the first race and had just seven team members compared to other teams with 40 or more participants.

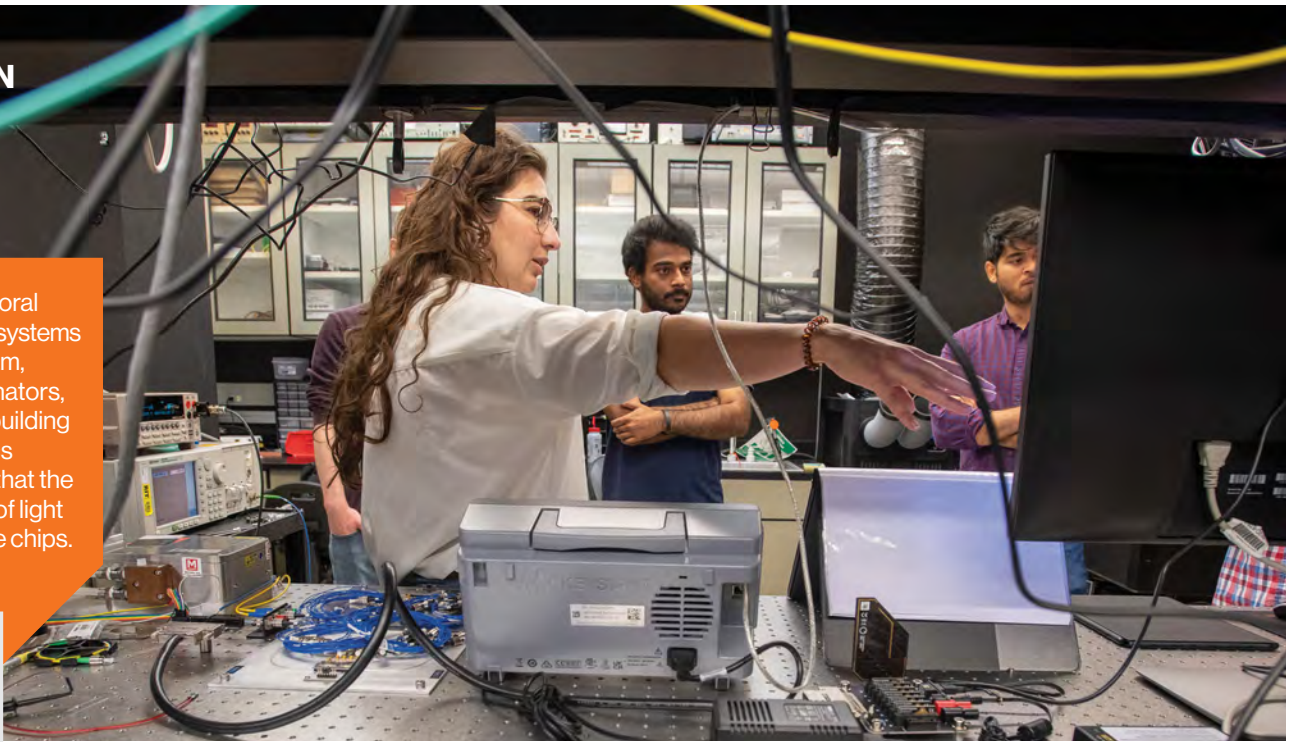
As the only team from the Middle East and North Africa region, getting to Monaco, acquiring sponsorship money and visas,

and shipping the vessel also proved challenging.

“Overall, I always felt confident in the boat and knew that it was built better than most of the other teams,” said Milan. “During the races it always felt like I was driving a Porsche, and the others were driving a Camry.”

Mollie Radzinski

Lilian Neim, a doctoral student in the microsystems engineering program, works on ring resonators, some of the basic building blocks for photonics devices, to ensure that the power and energy of light is maximized for the chips.



Carlos Ortiz

STEM degrees, co-ops draw international students

RIT doctoral student Lilian Neim is on the leading edge of research in neuromorphic photonics technology that will make artificial intelligence processing more efficient and higher functioning.

Neim, who is from United Arab Emirates and has earned a master's degree in engineering from RIT, works closely with her adviser and fellow students in the university's microsystems engineering Ph.D. program to hone in on her specialty.

She has recognized that the hands-on experiences examining signal processing have the potential to greatly enhance the speed and efficiency of artificial intelligence by utilizing light-based information transfer and neural architectures inspired by the human brain. Her discoveries are made possible due to her commitment to studying this unique aspect of engineering

in the United States.

Each year, RIT welcomes nearly 2,000 students from more than 100 countries to its campus. The draw of a top-notch STEM education, along with a nationally ranked co-op and internship program and an increasing global reach with numerous opportunities for programmatic exchanges, gives students the chance for real-world work experiences and career focus, according to Megan Kless, director of RIT International Student Services.

The department is always ready to help international students troubleshoot adjustment concerns, connect them to on- and off-campus resources, and provide stepping stones for their futures.

"Our international students are a large part of the fabric of RIT," said Kless. "There is a palpable excitement, a depth of involvement, and a passion

for living and working in the United States that makes our international students true assets in our community. In addition, we're able to provide the kinds of programs that are desirable to students in other countries. It's an environment that enriches all of us in more ways than we can imagine."

For Pierre-Ilias Arzimanoglou, a first-year 3D digital design student from France, the unique combination of integrating game design and foreign languages into his program, pursuing a passion for acting and the performing arts, and eventually pursuing his dream design career, made the choice to study in the United States an opportunity he couldn't pass up.

"I was searching online for universities abroad offering everything that I was looking for," said Arzimanoglou, who is excited for a career that will allow him to communicate and

collaborate with people from different countries. "RIT is very diverse, and not just speaking in terms of international students. I'm learning from others and growing every day, while having the opportunity to share my heritage and culture with new friends."

After graduating, Arzimanoglou would like to stay in the United States and work and then pursue a graduate degree in another country to broaden his horizons even more.

Neim, who has a long history of international travel and study, admits that she faced challenges when she arrived at RIT. But she said the close-knit community of students, faculty, and staff, in addition to a passion for her photonics research, quickly dispelled her loneliness.

"I consider RIT my home."

Vienna McGrain '12 MS

Business college's building upgrades bolster innovation

While admittedly not always a fan of group projects in the past, Ekua Quagraine is finding the multifunctional spaces encouraging collaborative learning inside the newly renovated Saunders College of Business stimulating and positive.

"These changes show the school's continuing focus on group and interactive learning," said Quagraine, a native of Kansas City, Mo., currently pursuing her MBA after earning her bachelor's degree from RIT in international business in 2023. "Professors have taken the new learning spaces into consideration when leading class, so we are doing more impromptu group activities and collaborating a lot more often."

Saunders College of Business students receive a unique education integrating business with technology and design thinking. The renovation of existing classrooms completed last summer, and the expansion of Max Lowenthal Hall to nearly double the business college's size, which will be completed this spring, will help to drive creativity and innovation among the next generation of business leaders.

"I'm interacting with my classmates a lot more than before," said Quagraine, who is planning for a career in supply chain management. "I like that I feel more comfortable and connected with my peers. I am not always a fan of group projects, but I've become closer with my classmates with these new classrooms, which makes collaborative group work more appealing."

Molly McGowan, a senior lecturer in the management department and director of the Leadership Academy at Saunders College, said the renovation and expansion will

allow for the Leadership Academy to have its own space, where students can plan their programs and peers can drop in for information and meet with program leaders.

"We will also be able to run some of our leadership programs in the new, larger spaces, and thus be able to accept more students into the program," said McGowan of the academy that fosters innovative leadership development opportunities that bridge business and technology for high school, undergraduate and graduate students; alumni; and employers.

In addition to working more closely with the university's K-12 programs, McGowan noted that the expansion will enable the academy to host high school and leadership programs and its annual summer camp on-site at Saunders College since "there will be more room for active learning and team activities."

"Many of our leadership programs are offered to the entire campus—open to students across all colleges and majors—so larger, collaborative spaces allow us to bring in more students from across campus to work collaboratively on leadership skills."

Quagraine said the business college's new modern spaces "make me glad to know people are thinking of how to make our experiences better and more enriching" at RIT.

"I am passionate about business because it shapes our lives in every way," she said. "Innovation is one of the major values within Saunders, and the college's exciting changes are enabling me to be innovative in each of my classes through project-based learning."

Rich Kiley



MBA student **Ekua Quagraine** works in the renovated Lowenthal Hall, home to Saunders College of Business. The upgrades have made her college experience more fulfilling, she says.



CURIOSITY AND JOY

Students spend their college years asking questions, discovering what makes them happy, and watching their dreams take flight.

More than 3,300 first-year and transfer students wrote their dreams on an orange piece of paper and tossed them into the air at New Student Convocation last fall.



**CURIOSITY
AND JOY**

Fourth-year student **Leah Rosen** sets type by hand and prints her own designs on vintage presses in the SHED's Cary Pressroom. She likes to make prints as gifts, such as calendars and cards, for her friends and family.



Maker community fills the new SHED

Leah Rosen distributes ink with a palette knife onto the rollers of a 70-year-old press in RIT's makerspace. She likes setting the type and pulling the handle to press words onto paper. The hands-on process of letterpress printing grounds her in this digital era, she said. It makes her think.

Rosen, a fourth-year student from Rochester, is pursuing a dual degree in industrial design and psychology. She is a lab assistant in the RIT Cary Pressroom in the Student Hall for Exploration and Development (SHED) and spends as much time as she can in the space, even dropping by in between classes to print her own designs or to admire the cases of vintage and storied type.

RIT's makerspace capacity has grown exponentially from a crowded room on the fourth floor in an engineering building to three floors in the centrally located SHED. New last fall, the SHED complex showcases different kinds of making and learning under one roof—in workshops, performing arts spaces, and extra-large classrooms designed for active learning.

The glass building covers 209,000 gross-square-feet of combined renovated and new construction and fills the space like a city block between the student union and a totally redesigned university library. It is RIT's largest capital project in 55 years.

The Cary Pressroom where Rosen works is only one of the SHED's seven makerspaces. Other areas focus on wood and metalworking, 3D printing, laser cutting, electronics, and textiles. Students new to making can learn about the process in the general makerspace.

Rosen's passion for printing—and getting her hands inky—has enriched her time at RIT with unexpected opportunities and a close mentorship with Amelia Hugill-Fontanel, associate curator at the Cary Graphic Arts Collection in RIT's Wallace Library.

Rosen helped Hugill-Fontanel organize, clean, repair presses, and

set up the Cary Pressroom. She is a teaching assistant in the Letterpress Printmaking class in the College of Art and Design and shows other students how to operate the presses. She wants to share the experience.

"There is such attention to detail and physicality to letterpress—or any hands-on making where there is a part of you in it," Rosen said. "That's what drew me to letterpress—it's a deliberate and careful process. Then, there's this beautiful intersection between design and this incredible technology that is hundreds of years old and combines with the written word. I am so unbelievably lucky to use this space."

The SHED is also home to competitive student performance teams that build rockets, robots, electric vehicles, and steel bridges. The Maker Showcase also allows teams and groups that did not relocate to the SHED an opportunity to share what they create with the community.

The SHED's soaring architecture and the bustle of approximately 15,000 people passing regularly through the building create a new vibe on campus.

"Walking into the SHED is like traveling to RIT in the future," said Michael Buffalin IV, SHED makerspace director. "You turn a corner on campus and suddenly there's this huge airy space with gorgeous light and palpable energy. It's a place where you can express yourself through creative arts, apply critical thinking through making, and work in teams to tackle problems."

The free-floating synergy is something Hugill-Fontanel hopes students like Rosen harness in the Cary Pressroom.

"We are in a prime space," Hugill-Fontanel said. "We can merge historic letterpress with 21st-century technologies, and that's what the students know how to do. They are savvy at using digital design tools, but to output and use it as an analog process, too, is another kind of learning."

Susan Gawlowicz '95

Zoe Shearer, a first-year computer science student, says ArtEx workshops push students to get out of their comfort zones and try something new.



Travis LaCoss



Students embark on 'bite-sized creative adventures'

The trial-and-error process of artisan crafts like throwing clay on a pottery wheel or carving a wood sculpture is something that students outside of RIT's art and design programs may not be familiar with. Through a new program called RIT Art Experience (ArtEx), students from across the university can enjoy hands-on creative exploration with a variety of artistic media ranging from ceramics and wood to molten metal and glass.

Alli Halbert, a first-year game design and development student from Campbell, Calif., relished the opportunity to join the program.

"Even though I do my own forms of art, like drawing at home, I've always wanted to try more specialized types of art," said Halbert. "Some media require specialized equipment like a pottery wheel or a blacksmithing forge, but I don't have access to those things and can't just go out and buy them. ArtEx was a really good opportunity to try these things out."

The ArtEx program, offered by RIT's College of Art and Design (CAD), carves out time and resources for students to follow their curiosity, try new things, and express themselves through hand-crafted creations. This is the first full academic

year ArtEx is being offered, and there are roughly 200 students taking part in the program.

Robin Cass, director of creative engagement programs for CAD, explains that the workshops are akin to "bite-sized creative adventures" and bolster students' confidence and critical-thinking skills in addition to being fun and exciting.

"ArtEx workshops offer students opportunities to tackle open-ended challenges that require divergent rather than convergent thinking. There is no 'right' answer when it comes to creativity; all options are open and valuable," said



Carlos Ortiz

Artist-in-Residence Priscilla Kar Yee Lo, right, guides **Ysabel Heath,** a first-year mechanical engineering student, through an ArtEx hot glass workshop. The students made paperweights.

Cass. “It’s been especially inspiring to hear students express wonder and excitement during their ArtEx events. These encounters can spark awe and open students’ minds to new possibilities.”

Halbert shared that participating in the ArtEx programming and working with her hands helps push her to think differently, refresh her brain power, and lean into the unknown.

“I get to try out something that I’ve never experienced before in an environment that I’ve never been in,” Halbert said. “We have a basic demonstration and can ask the instructor for help, but I’m not

being told exactly what to do. It’s nice to figure it out with your own hands and with your own thought process.”

For students like Zoe Shearer, a first-year computer science student from Colorado Springs, Colo., a large part of ArtEx’s appeal is the flexibility and freedom it offers. Students can select what workshops they participate in and opt in at whatever level of participation works with them.

“It’s a nice feeling when you don’t have to worry about fitting a class somewhere in your schedule or spending a full semester focusing on just one subject,” Shearer said. “It’s a much different environment when

there’s no required attendance, no formal assignments, or expectation to perform at a certain level. It’s easier to take my time and enjoy it.”

Participation in ArtEx is currently available for prospective incoming first-year students whose primary major is outside of CAD. The program consists of a series of workshops, artistic demonstrations, artist lectures, and off-campus field trips. After their first year, students can stay involved with ArtEx throughout their time at RIT.

Felicia Swartzenberg '19

Activities outside of class keep students **buzzing**

When Ellie Warren was in high school, her grandfather introduced her to beekeeping. She got a scholarship to take bee classes and buy a protective suit, bees, and hives for them to live in.

When it came time for the class to talk about what they had learned six months later, everyone else's bees had died.

"I had three hives; the bees were all alive and making honey," Warren said.

Today, her grandfather back in Hilliard, Ohio, takes care of her bees while she keeps busy overseeing the four hives and some 100,000 bees that reside near the RIT tennis courts as president of the RIT Beekeeping Club. It's just one of more than 300 student clubs on campus involving art, gaming, music, politics, science, sports, and theater.

Warren, a third-year bio-medical sciences and Spanish double major, plans to take care of people, too. She intends to become a physician and has been accepted into the State University of New York Upstate Medical Center program in Syracuse after she graduates from RIT.

Keeping bees healthy isn't just a hobby. It's part of her commitment to help the environment and to educate others about the importance bees play in the ecosystem. She visited elementary schools last year to talk with students about beekeeping and the importance of pollination. She knows sign language and has also given a tour of the hives to students at RIT's National

Technical Institute for the Deaf.

"I'm an environmentalist because of seeing how the bees interact with the world around them," she said. "Everything is truly connected, and when the bees start dying and the world starts warming and having more severe weather events, humans, animals, and plants are all affected."

The 30-50 active members of her club attend weekly visits to the hives. The club holds meetings to teach members how to make crafts and soap from beeswax and honey. Once a year, they extract honey.

They also hold lectures with topics such as diagnosing a disease in a hive, environmental changes such as mosquito fogging and global warming that may harm bees, and the role of beekeepers in politics.

Last summer, Warren had a research internship in Massachusetts where, coincidentally, a beekeeping conference was being held. She got to attend sessions about educating the next generation of beekeepers and the environmental impact on bees.

Warren has become more politically aware of climate control measures and the lack of them.

"I vote for the people who would make positive climate change policies and share information about voter registration on my social media in hopes that people will vote like their lives, and the bees' lives, depend on it. Because they do."

Greg Livadas



Ellie Warren, a third-year biomedical sciences and Spanish double major, helps oversee four hives and some 100,000 bees on campus. The RIT Beekeeping Club is one of more than 300 student clubs.

Students worked with instructors to finalize their **birdhouse designs** before diving into construction. The instructors prompted students to think critically about both design aesthetic and practical use of the final product.



Students lean into **technology and**

After drafting and reviewing their original designs, students began working on their latest project. With wood and hardware in hand, each student took a unique approach to building a birdhouse to help promote and protect the bird populations on campus.

Natalie Siwek, an environmental science student from Shrewsbury, Mass., shared that giving back to the environment she has grown to love over her four years at RIT is gratifying.

“It’s rewarding to know that I’m not just doing the work for a grade. A lot of the spaces we’ve been working with mean a lot to me. I have a lot of memories associated with them,” said Siwek. “And

picking a space on campus we wanted to improve for our final project was really exciting for me.”

Building species-targeted birdhouses is one of the many hands-on projects Siwek and her class completed during the fall as part of a new course called Campus Ecology, currently offered by RIT’s College of Science.

Described as an active learning course, students in the course explored how culture, art, science, and design influence their views and understandings of nature. They also discussed how interdisciplinary collaboration and leaning into the intersection of technology, the arts, and design could improve communication

and understanding of ecological concepts and sustainability goals.

To ensure students could benefit from a truly interdisciplinary experience, Professor Karl Korfmacher connected with scholars from across the university to prepare a new curriculum and co-teach the course.

“When I was a student, I loved the interdisciplinary classes that blended a lot of different fields,” said Korfmacher. “I’ve been looking to create a course like this for quite some time and, thankfully, there’s enough like-minded people on this team who have that same kind of vision.”

There is a total of eight faculty and staff members leading the course from the College of Science, College of Art and



Photos by Carlos Ortiz

design to improve the environment

Design, and Kate Gleason College of Engineering.

Siwek shared that learning from such a diverse array of experts was a big selling point for the course.

“I think it has helped me become more of a critical thinker. I tend to resort more to stuff I’ve seen before, stuff that’s been shown by science to work,” said Siwek. “But by getting the different perspectives from my professors and classmates, I was able to expand my idea of what is actually possible.”

Hands-on projects are a heavy component of the course, and students also take interactive field trips to further explore the campus environment. Emma Avratin,

a fourth-year School of Individualized Study student, said she enjoyed working outside of the classroom and leaving a tangible impact on the campus landscape.

“I think the best learning happens when we can really be hands-on. We can prepare in the classroom as much as we’d like, but unless you’re out there doing the work, you never truly know how to approach certain situations or what it really takes to solve a problem,” said Avratin, from Sharon, Mass.

Avratin also emphasized the value of having a plethora of different minds working together in one classroom.

“In life, we’re not going to only work with one area or one field of study. We need people who are solving multi-level prob-

lems, so combining multiple perspectives is what we need to focus on. That’s what our future needs,” said Avratin.

Campus Ecology is currently offered as a College of Science Special Topics course, but Korfmacher shared that the goal is to offer it as a cross-listed course with the Kate Gleason College and College of Art and Design.

Due to the interdisciplinary nature of the course, once cross-listed, Campus Ecology is envisioned for approval as either an Artistic or a Scientific Principles general education perspectives course.

Felicia Swartzenberg '19



DISCOVERY AND AWE

Undergraduate students can participate in cutting-edge research—
uncovering the unexpected and making an impact globally.

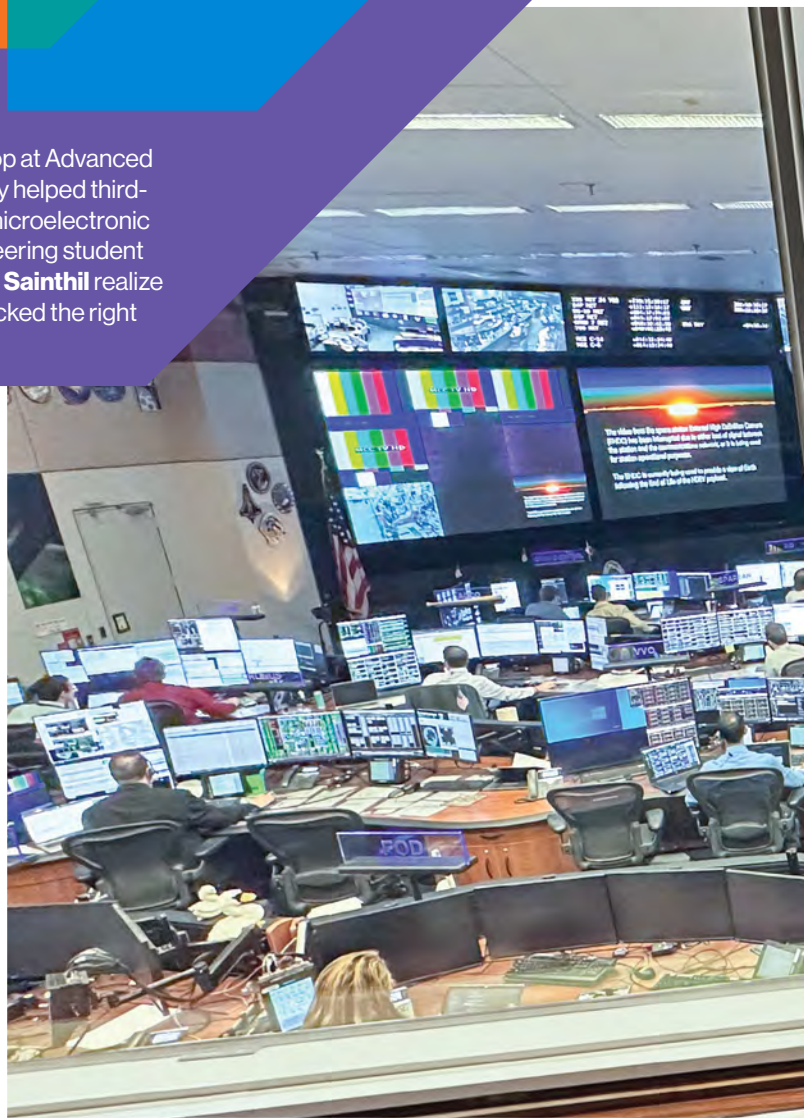
From left, **Assistant Professor Stefan Schulze** works in a genetics lab with second-year students **Lorelei Robinson**, biotechnology and molecular bioscience, and **Chenxin Wang**, biomedical sciences.





Jesse Winter

A co-op at Advanced Energy helped third-year microelectronic engineering student **Elissa Sainthil** realize she picked the right major.



Students focus on future through **co-op experiences**

It took many years and various side ventures for fifth-year computer science major Conor Gagliardi to land a coveted co-op opportunity last fall at NASA's Lyndon B. Johnson Space Center in Houston.

Coming from an underprivileged family with parents who did not attend college, Gagliardi wasn't sure he could continue to afford his classes, so in 2018 he joined the Army National Guard to help him cover tuition. He was deployed in 2020.

His humanitarian relief work using drones to help victims of the Port of Beirut explosion piqued his interest in

using unmanned systems.

Back at RIT, Gagliardi took classes outside his major, including a machine learning class that drew his attention to research. He also expanded his experience by taking a part-time job using computer vision and perception work in artistic projects. He spent the summer of 2023 as a National Science Foundation Research Experience for Undergraduates student at the University of Oklahoma studying vision-based drone swarms, which harkened back to his Army service.

All that led Gagliardi to one of the

most technologically innovative centers in the world, where his breadth of knowledge has him programming rovers to move autonomously and working to help create the framework for the NASA SUITS Challenge, which gives opportunities to undergraduate students.

Without the co-op program at RIT, Gagliardi says he wouldn't have had the foresight to expand his areas of expertise and become a qualified candidate for NASA.

"The co-op program had me thinking not only about the academic side, but also the professional development side," he said.



Conor Gagliardi, a fifth-year computer science major, spent the fall semester on co-op at NASA's Lyndon B. Johnson Space Center in Houston.

NASA

"I wouldn't have taken part-time jobs and gotten the experience to end up where I am right now."

RIT's co-op program is one of the oldest in the nation, beginning in 1912. More than 5,000 RIT students typically complete a co-op each year.

Third-year microelectronic engineering student Elissa Sainthil also used her fall co-op at Advanced Energy in Ronkonoma, N.Y., to solidify her career aspirations in a field with constantly progressing technology.

A second-generation RIT student, Sainthil credited RIT's variety of majors, small class sizes, and friendly professors as the reason to follow in her mother's academic footsteps to RIT. She is

able to spend some time at home in Central Islip, N.Y., while working with Advanced Energy's UltraVolt products during her co-op.

Sainthil has learned a lot about electrical engineering while also building on her education in microelectronics. She has been involved in testing and documenting high voltage power supplies with the company.

While learning about different projects, she has had supportive co-workers who have taken the time to explain how things work and have given her the time to fully understand the work.

Although she says the process of getting her

first co-op position wasn't always easy, the support system, specifically from the extracurricular group Women in Engineering @ RIT, is a big part of her success.

Her co-op adviser is also to thank for sending Sainthil's résumé to companies, which resulted in interviews. During those interviews, Sainthil's on-campus leadership experience stood out to potential employers. The experiences and resources available through RIT have given her the preparation and confidence needed once she heads into her professional life.

"Luckily, because of this co-op, I've had the 'aha' moment that yes, I picked the right major," said Sainthil. "I also think because of this co-op I will want to work in the semiconductor manufacturing industry. This made me more prepared for when I go out into the real world."

Mollie Radzinski

RIT was recognized in the 2024 edition of *U.S. News & World Report Best Colleges*, which ranked its co-op and internship program **fifth in the nation**, rising six spots from last year.

**DISCOVERY
AND AWE**

Risa Robinson, head of the Department of Mechanical Engineering, left, works in the Respiratory Technologies Laboratory with Ph.D. student **Gloria Mbaka**.

Robinson's team will move into a new two-story research building that is expected to open this fall.





Scott Hamilton

Team's research method becomes industry model

Robinson '89 (mechanical engineering), '95 MS (imaging science) and members of the Respiratory Technologies Laboratory found moderate toxicity rates in e-cigarette liquids but also saw that e-cigarette users consumed more to compensate for the lower nicotine hit—making them as risky for some users as traditional cigarettes.

Her work completely shifted how this analysis was done and became an industry model of how to assess usage in an individual's own environment. Through this new viewpoint, the team recorded harmful emissions that were not otherwise seen in a lab setting, and this distinct data contributed to FDA policies and regulations about e-cigarette usage today.

"We needed to measure how the person smokes, or how they vape. In labs, we have very regimented protocols. But a person doesn't smoke like a robot in a lab," said Robinson, head of the Department of Mechanical Engineering in RIT's Kate Gleason College of Engineering and an appointee to the FDA's Tobacco Products Scientific Advisory Committee in 2021.

Prior research involved testing smoking products on machines in labs. Robinson's team built new, original equipment—wireless personal use monitors—that attach to e-cigarette devices and record digital signals such as puff volume, flow rate, and fluid intake. Users vaped at home, at work, or out socially, and the equipment recorded far more accurate data based on these behaviors, making for more authentic user profiles.

"It is important to understand that because we are trying to regu-

late a product. You can't regulate psychology," said Robinson. "But if we can understand the psychology, that can help us inform the regulation."

Robinson's projects have grown in scope since she began this research in early 2000, expanding her work as e-cigarettes grew in popularity. More than 2 million middle- and high-school students reported using e-cigarettes in 2023, according to the Centers for Disease Control and Prevention. Use of tobacco products—in any form—is unsafe, the CDC reports.

Beyond technical aspects of the research, understanding behaviors plays a role in addiction and cessation. To this end, Robinson and Edward Hensel, associate dean for research in the Kate Gleason College, are working on new projects with Nathan Eddingsaas, associate professor in the School of Chemistry and Materials Science, and Stephanie Godleski, associate professor in the Department of Psychology. The multidisciplinary approach integrates technical information with behavioral elements—how users select and mix e-liquids—and considers the chemical make-up of the products to indicate overall harmful exposure.

Robinson and her team will move into a new 39,200-square-foot research building that is expected to open this fall. The two-story building will help accommodate RIT's expanding research footprint in science, computing, and engineering.

RIT reached another record year in sponsored research awards, attaining more than \$94 million in fiscal year 2022-2023.

Michelle Cometa '00

Researchers work to benefit

RIT's researchers are improving healthcare for marginalized populations, explaining mysteries



Scott Hamilton



Elizabeth Lamark

Anthony Jimenez

Assistant professor, Department of Sociology and Anthropology, College of Liberal Arts

Area of Research:

The impact of COVID-19 is felt by everyone, particularly healthcare practitioners working on the front lines of the pandemic. Jimenez is capturing the experiences of regional healthcare workers, with particular focus on those providing services to marginalized populations. These practitioners often receive the least stable funding sources. He hopes that sharing first-person accounts of what doctors, nurses, and other medical staff experience will spark change both in policy and in public sentiment toward these workers.

Motivation:

“As a medical sociologist, I want to understand the larger social, structural, and political causes of today’s health disparities. By sharing these first-person accounts, I would like to see a social and cultural recognition among everyday folks of these practitioners’ work and why it’s important. In my mind, that’s how we begin to collectively, on a societal level, envision what change looks like. Change is possible, but it requires creativity, imagination, and courage—all of which we are all capable of.”

Brenda Abu

Assistant professor, Wegmans School of Health and Nutrition, College of Health Sciences and Technology

Area of Research:

Throughout her career, Abu witnessed the devastating toll of anemia—the hidden hunger—on women and children in Ghana and in the United States. Anemia can cause severe fatigue, pregnancy complications, and stunted physical and mental development. Unchecked, it can result in heart problems, oral disease, and death. Abu envisions a holistic approach to battling anemia that builds resilience against undernourishment and disease through access to early detection, fortified foods and agricultural products, social programs, and nutrition education and treatment.

Motivation:

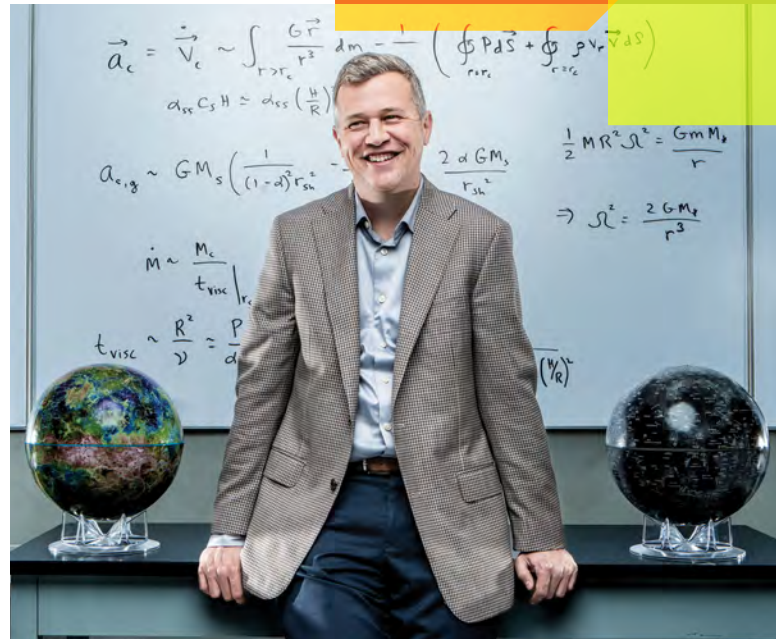
“With my training and expertise in nutrition, my long-term career goal is to bridge gaps in nutritional and oral health research and generate groundbreaking interventions for early warning, early detections, and prevention of oral disease and iron deficiency among underserved mothers and young children.”

society

of the universe, battling anemia, and making autonomous driving systems more secure. Meet four of them.



Carlos Ortiz



Scott Hamilton

Hanif Rahbari

Assistant professor, Department of Cybersecurity, Golisano College of Computing and Information Sciences, Department of Computer Engineering, Kate Gleason College of Engineering

Jason Nordhaus

Associate professor, Department of Science and Mathematics, National Technical Institute for the Deaf

Area of Research:

Rahbari is making roadways safer by enhancing the security of connected vehicle technology for driver-assistance and autonomous driving systems. The wireless communications among connected vehicles — enabled by 5G — are vulnerable to emerging cyberattacks. Rahbari earned a National Science Foundation CAREER award to develop better security protocols and design an innovative hardware testbed that integrates real wireless transmissions with a digital twin of roadways to evaluate those protocols. His work will also protect against future quantum-related cryptography attacks, following a practical roadmap that he is developing for the next two decades of connected vehicle security.

Motivation:

“These advanced driving systems have the potential to save tens of thousands of lives every year while also making driving more inclusive. If we’re going to rely on this technology to help human drivers, it needs to be secure and reliable — both today and 20 years in the future when there are old cars and new attacks. Otherwise, it could make things worse on the road. At RIT, our diverse and interdisciplinary team will play a key role in creating and realistically evaluating connected vehicle technologies. We have a chance to make the future safer, and I’m excited for that challenge.”

Area of Research:

By unraveling the physics of neutron stars, Nordhaus is breaking through disciplinary and cultural boundaries to explain mysteries of the universe, including how the world’s heaviest elements, like gold, silver, platinum, and lead, are formed. His National Science Foundation funding will also help promising undergraduates who are deaf or hard of hearing or are of Hispanic heritage study alongside the world’s experts, building bridges to earning competitive positions in graduate programs or STEM careers.

Motivation:

“We are entering a golden age for studying neutron stars. Over the next several years, neutron star mergers will be observed through gravitational waves, electromagnetic radiation, and — potentially — neutrinos, the most abundant particles that have mass in the universe. These observations will provide unparalleled opportunities to answer fundamental questions in astrophysics. With a dream team composed of the world’s experts on neutron stars, we are pursuing research avenues that will leverage this data to drive new scientific discoveries.”

From left, doctoral student **Cindy Okoh** brainstorms with **Clyde Eirikur Hull**, professor of management; Ph.D. students **Negin Haghi** and **Biju B. Varghese**; and **Rich DeJordy**, chair of the Department of Management.

RIT enrolls more than 450 doctoral students, including a record 112 new Ph.D. students who started last fall.



Carlos Ortiz

Doctoral degrees continue to

When Biju B. Varghese discovered that Saunders College of Business was offering a new Ph.D. in business administration this past fall, he knew he'd found a program tailor-made for him with the business college's theme: "At the intersection of business and technology."

"This theme largely aligns with my background of computer engineering and management—particularly human resource management—and motivated me to apply," Varghese said. "The business programs at Saunders College are rigorous and strongly

infused with technology."

The India native was among the first cohort of students admitted into Saunders College's new Ph.D. in business administration, which marked the university's inaugural social sciences doctoral program.

RIT's Ph.D. programs continue to grow. Today, RIT enrolls more than 450 doctoral students, including a record 112 new Ph.D. students who started last fall.

Other Ph.D. programs include astrophysical sciences and technology, biomedical and chemical engineering,

color science, computing and information sciences, electrical and computer engineering, imaging science, mathematical modeling, mechanical and industrial engineering, microsystems engineering, and sustainability.

More doctoral programs are on the way, with the university launching a new Ph.D. in physics this fall. Also in 2024, the College of Liberal Arts will introduce a new doctoral degree in cognitive science, a joint program with four other colleges on campus.

The Saunders College program is unlike traditional Ph.D. programs in business



expand

administration because it leverages RIT's strong reputation as an innovative technology institute.

The program is designed to inspire and train scholars like Varghese to identify, investigate, and solve unique business challenges that influence business and society—particularly those that are brought on by today's ever-changing technological changes.

The program pushes the boundaries by integrating technology and innovation as contextual underpinnings for each of the

program's areas of specialization: digital transformation, strategy and innovation, and finance and accounting.

Varghese said he also was drawn to the new doctoral program being built upon an apprenticeship model, which will enable him to work with expert faculty mentors on research projects that address unique business challenges.

Saunders College faculty are engaged in researching emergent trends such as the effect of technological innovation on industry dynamics, adopting block chain

in auditing and fraud detection, e-commerce and consumer behavior, algorithmic trading, algorithmic decision support, and information systems development—all of which lie at the intersection of technology and business.

Upon graduation, Varghese said he aspires to teach in a top-tier business school.

"I am very happy to have discovered Saunders College," he said. "It feels like I am part of a family here."

Rich Kiley

BY THE NUMBERS

Enrollment from all RIT campuses

Last fall, RIT enrolled a record number of students for the third straight year. Figures include global campuses.



Enrollment for students from under-represented races/ethnicities (AALANA)

AALANA = African American, Latino American, and Native American students. Excludes global campuses.



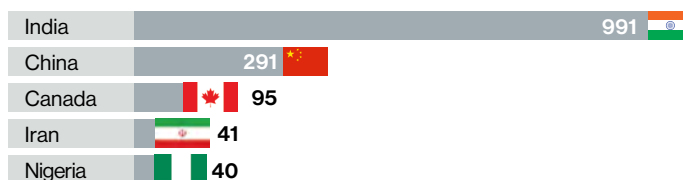
Students studying at RIT's global campuses

RIT has campuses in China, Croatia, Dubai, and Kosovo. Enrollment abroad continues to grow steadily.



International student enrollment at RIT's main campus

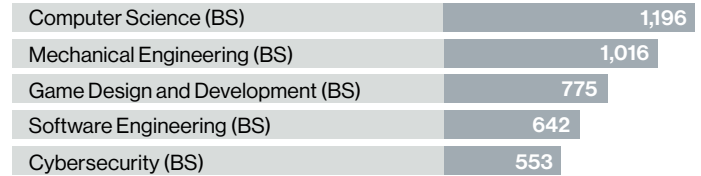
Last fall, RIT enrolled students at its main campus from more than 100 countries. These are the top countries outside the U.S. that RIT students come from.



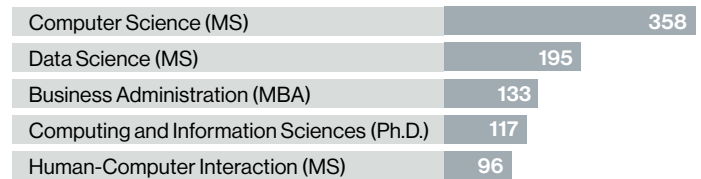
Degree programs with the highest enrollment at RIT's main campus

RIT's main campus enrolled 14,120 undergraduate students and 2,828 graduate students last fall across nine colleges and two degree-granting institutes.

Undergraduate

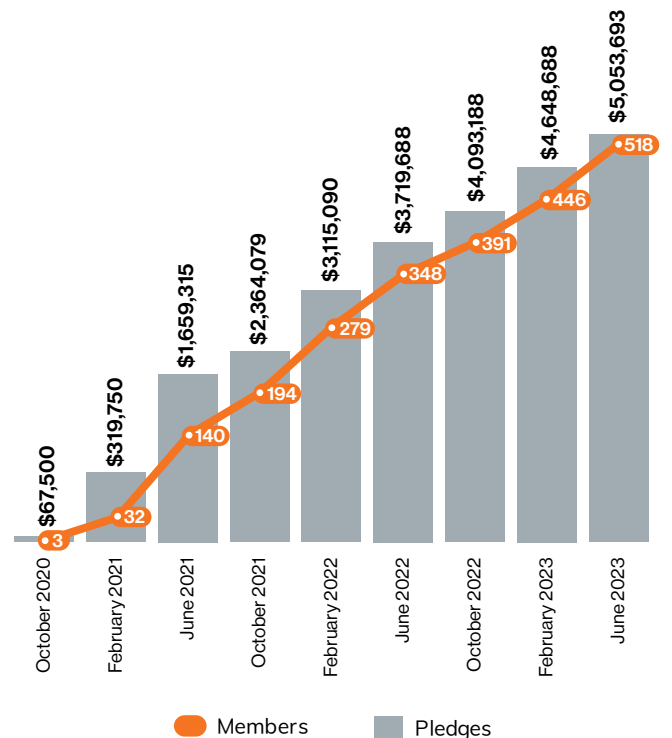


Graduate



Founding Sentinel Society members

The Sentinel Society is a community of leadership donors who make a meaningful annual investment in the university, allowing RIT to address emergent student needs, seize educational opportunities, and support strategic initiatives and student life. Since its founding in the fall of 2020, the Sentinel Society has grown to 518 members strong who collectively have pledged \$5,053,473 across 21 unrestricted funds. Learn more at rit.edu/sentinel.



Ph.D. degrees awarded in 2022-2023

RIT awarded 63 Ph.D.s last academic year. More Ph.D. programs are scheduled to launch this fall.

Imaging Science	18
Computing and Information Sciences	14
Astrophysical Sciences and Technology	6
Microsystems Engineering	6
Electrical and Computer Engineering	4
Mechanical and Industrial Engineering	3
Engineering	3
Sustainability	3
Mathematical Modeling	3
Color Science	2
Biomedical and Chemical Engineering	1

Annual Fund gifts

Gifts to the Annual Fund support the most pressing needs of RIT's colleges and major programs. Fueled by the growth in Sentinel Society memberships, the Annual Fund has more than doubled from \$890,130 in fiscal year 2019 to \$1,987,279 in fiscal year 2023.

FY 2019	\$890,130
FY 2020	\$914,037
FY 2021	\$1,227,177
FY 2022	\$1,846,301
FY 2023	\$1,987,279

Research at RIT

R2

Carnegie Classification of Institutions of Higher Education research ranking.

\$94 million

Sponsored research awards for the 2022-2023 fiscal year.

1 of 6

U.S. universities named in the U.S.-Japan Semiconductor Development Program to improve competitiveness in computer chip development and manufacturing.

11

Number of Fulbright Scholars enrolled at RIT this year.

\$325 million

Value of research proposals submitted in the 2022-2023 fiscal year, a 23 percent jump.

98

RIT broke the Top 100 in the national university ranking in the 2024 edition of *U.S. News & World Report Best Colleges*.

158

Students who participated at the 32nd annual Summer Undergraduate Research Symposium.

1

Faculty-researcher exploring how seal whiskers can inspire new sensor technologies.



From Prototype to Perfection

RIT students push the boundaries of what's possible.

Imagine RIT: Creativity and Innovation Festival showcases the ingenuity of students, faculty, and staff with 350+ interactive exhibits, research projects, hands-on demonstrations, and live performing arts.

Join us for a day of discovery, with 25,000 other attendees!

Saturday, April 27
10 a.m. – 5 p.m.

rit.edu/imagine

Inspiring Imaginations

The festival takes place all over campus and within our new Student Hall for Exploration and Development. While on campus, tour the SHED—a super collider of ideas—and experience the extraordinary.

