

WELCOME TO
GEM Grad Lab 2023
Rochester, New York

2023



UNIVERSITY of
ROCHESTER

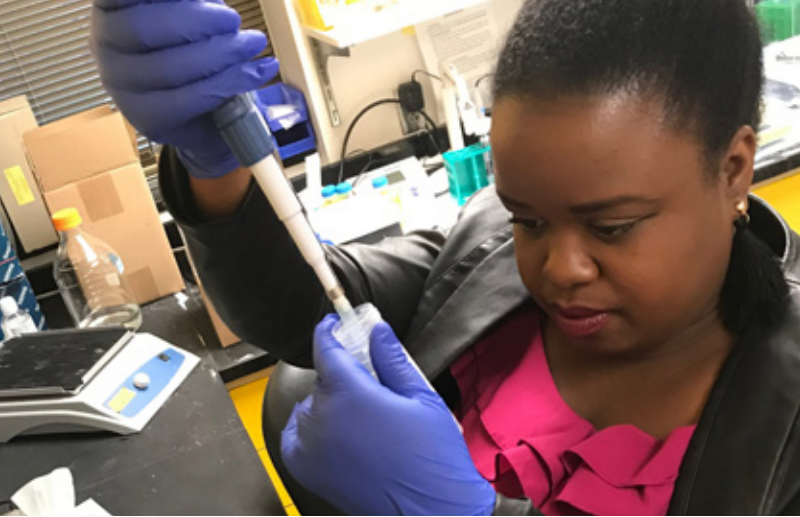


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Welcome from the National GEM Consortium

Dear Visiting Student:

Forty six years ago, The National GEM Consortium was founded to enhance the value of the nation’s human capital by increasing the participation of underrepresented groups (African Americans, American Indians, and Hispanic Americans) at the master’s and doctoral levels in engineering and science. GEM recruits high quality underrepresented students looking to pursue Master’s and Doctoral degrees in applied science and engineering, and matches their specific skills to the specific technical needs of GEM employer members.

Today, our organization serves over 2,000 applicants per year matching their skills and interests to the needs of higher education and industry. We’ve successfully matched over 4,000 GEM Fellows to date. Our GEM Grad Labs are a one-day intensive designed to enhance interest and participation among underrepresented populations in graduate programs focused on engineering and the sciences. We typically host around a dozen campus events each year across the country and are excited to bring this event for the first time in recent years to a dynamic city in New York State. Visit <https://www.gemfellowship.org> for more information on our organization.

On behalf of everyone at GEM, thank you for investing the time and effort to find out whether your future lies in a graduate program in the STEM disciplines. We intend to make it worth your while.

Sincerely,

Joann Ransom
Program Manager

Welcome from your Host Institutions

Greetings!

On behalf of the University of Rochester, I welcome you to our community for GEM Grad Lab April 2023. I sincerely hope that you enjoy your visit as you get a picture of the unique learning experience and supportive community that our Rochester educational institutions have to offer. We are proud of our collegial and close-knit community and attract graduate students who are seeking this kind of welcoming atmosphere where they can thrive and pursue their passions. We hope that you’ll get a sense of what it’s like to learn, live and work here in Rochester.

Let me say how very pleased we are to have you join us for what will be an informative and enlightening schedule today. We hope you’re ready for a rigorous examination of graduate school options, and what will be expected of you should you decide to pursue a masters or doctoral program in a STEM discipline.

I hope that you enjoy visiting Rochester and welcome you to explore our universities further to determine your best fit for the next stage of your educational journey.

Sincerely,

Melissa Sturge-Apple, Ph.D.
Vice Provost, University Dean for Graduate Education

Why University of Rochester

The University of Rochester offers an outstanding academic experience for graduate students. With its rigorous academic programs and world-class faculty, the university is committed to fostering critical thinking, innovative research, and intellectual curiosity. Students benefit from a collaborative and supportive learning environment, where they are encouraged to explore their passions and interests, and to pursue interdisciplinary approaches to research and scholarship. The university's state-of-the-art facilities and resources, including it's extensive library collections and cutting edge research labs, provide students with the tools and technology they need to excel in their chosen fields.

Additionally, the university's location in the vibrant city of Rochester, New York, offers a wealth of cultural and recreational opportunities, making it an exciting and dynamic place to live and study.

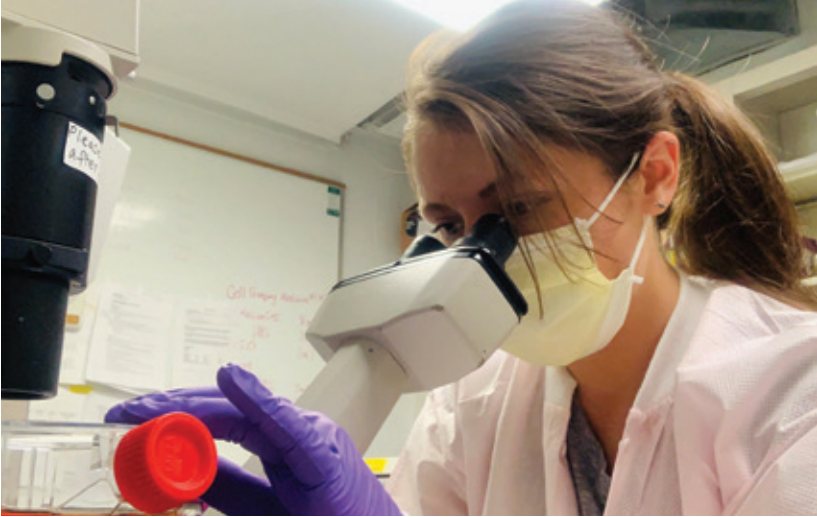
Interdisciplinary Study

As a leading R1 institution our students have the benefit of engaging in interdisciplinary research that brings together scholars and experts from across all seven of our schools to address complex and multifaceted challenges. Our deep commitment to collaboration pushes us to see beyond boundaries. We pursue unexplored possibilities by asking new questions and forging unexpected partnerships.

This interdisciplinary environment allows you to pursue intellectual challenged in your specific field – as well as in other related interests.

Fast facts

- No. 36 ranking (US News & Report, 2022)
- 60 Research Centers & Institutes in AS&E
- \$438M in Annual Funding in AS&E
- \$150M in NIH research funding for SMD





Diversity, Equity and Inclusion

The University of Rochester aspires to make every person feel safe, welcome, and supported at all times; to be a place where everyone, regardless of identity or challenges they face, is lifted up to become their best and healthiest selves; to serve as a powerful force for eliminating racism, division, and exclusion in our communities and beyond.

Our Institutional Office of Equity and Inclusion is committed to developing new initiatives and supporting existing initiatives throughout the university that align with our five institutional priorities

- Developing and sustaining an infrastructure to support equity, diversity, and inclusion
- Enhancing the recruitment and retention of our representational diversity of faculty, staff, and students.
- Cultivating an inclusive climate, culture, and University Community.
- Advancing the University's mission through an equity, diversity, and inclusion lens.
- Community engagement for racial and social justice.



Learn more about our Institutional Office of Equity and Inclusion at rochester.edu/diversity

The University of Rochester is home to several research centers, groups, and offices whose focus is to support our students of color and bring awareness to the unique experiences of BIPOC communities both within Rochester and throughout the globe.

- David T. Kearns Center for Leadership and Diversity
rochester.edu/college/kearnscenter/index.html
- The Frederick Douglas Institute for African and African-American Studies
sas.rochester.edu/aas/index.html
- School of Medicine and Dentistry Office of Equity and Inclusion
urmc.rochester.edu/smd/office-of-equity-and-inclusion.aspx
- Neuroscience Diversity Commission
urmc.rochester.edu/del-monte-neuroscience/about/diversity-commission.aspx
- Clinical & Translational Science Institute's Office of Health Equity Research
urmc.rochester.edu/clinical-translational-science-institute/diversity.aspx



Living in Rochester

If you're looking for a great place to live, learn, work and play, take a look at Rochester.

As the fourth-largest city in New York, Rochester is big enough to offer an array of cultural, recreational and leisure activities, and small enough to live affordably and navigate easily. Thanks to a cost of living significantly below the national average and proximity to the state's beautiful Finger Lakes region, many who come to Rochester to study choose to stay.



Rochester Rankings

- #16 [National Quality of Life \(US News & World Report\)](#)
- #1 [Affordable Housing Market \(Investor's Business Daily\)](#)
- #1 [Northeastern City to Live in After Coronavirus \(Business Insider\)](#)
- #8 [Best Cities for Nightlife 2021 \(Rent.com\)](#)

Art and Culture

Rochester's long list of museums, theatres, galleries and special events gives city dwellers year-round cultural experiences to enjoy. Here are a few favorites:

Festivals

- [Park Ave. Summer Art Festival](#)
- [Clothesline Arts Festival](#)
- [Lilac Festival](#)
- [Rochester International Jazz Festival](#)

Museums

- [Memorial Art Gallery](#)
- [George Eastman Museum](#)
- [The Strong National Museum of Play](#)

Theatre & Music

- [Eastman Theatre](#)
- [Geva Theatre Center](#)
- [The Little Theatre](#)

Food & Drink

Whether you're in the mood for specific international cuisine or a place to enjoy drinks with friends, Rochester's dining scene has something for you. From Italian fare at [Grappa](#) in nearby College Town to house-brewed beers and small bites at [Swiftwater Brewery Company](#) down the road to Cajun classics downtown at [French Quarter Cafe](#)—the options are endless.

Outdoor Activities

Just steps away from campus, you'll find historic areas to explore, a diverse array of events and activities, and scenic gardens—as in Highland Park, home of Rochester's famous Lilac Festival. In a short drive, you can be on the shore of Lake Ontario, touring one of many wineries or craft breweries, taking in a concert, meandering through a museum, gathering farm-fresh foods at the Public Market, bicycling along the Erie Canal or hiking in the "Grand Canyon of the East"—Letchworth State Park. Rochester truly has something for everyone, every season of the year.

Sports

Rochester is home for many popular sports teams such as [Red Wings baseball](#), [Amerks hockey](#), and [RNY FC Soccer](#). Fair warning: for better or for worse, Rochesterians love the Buffalo Bills. Rochester is also one of the Northeast's premier golf destinations regularly hosting PGA, LPGA, and other prestigious golf tournaments.



For just a taste of what Rochester and the Finger Lakes region have to offer, check out this interactive map with a few selected attractions. (Scan the QR code)

Where We're Located

Rochester is located within 400 miles of 14 states and is within driving distance to major cities, including Toronto and New York City.



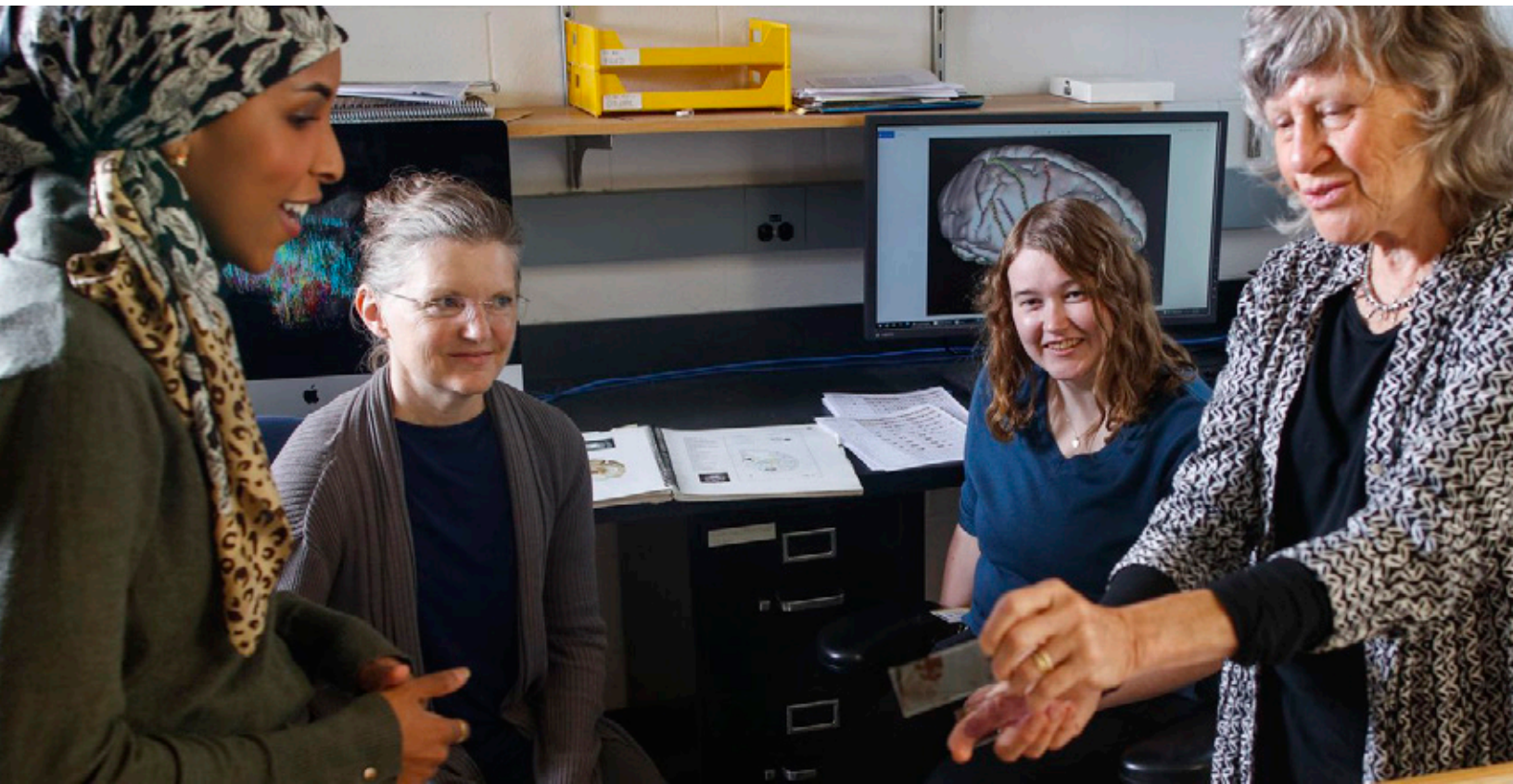
How far does my stipend go?

Compared to these cities,	Rochester's cost of living is:
New York City	62% lower
San Francisco	52% lower
Washington, DC metro	41% lower
Seattle	39% lower
Philadelphia	12% lower
Madison, WI	9% lower
Pittsburgh	5% lower



Resource: See how far your stipend goes compared to other cities with these cost-of-living calculators by [CNN Money](#) or [NerdWallet](#).

Research at University of Rochester



School of Medicine and Dentistry

New Grant Will Unlock Workings of Brain’s Waste Removal System

Rochester is playing an important role in The BRAIN Initiative, a massive research program supported by NIH and several other federal agencies that aims to fill gaps in our knowledge of the brain’s organization and function. Scientists in our Center for Translational Neuromedicine received a [\\$15 million grant](#) to accelerate our understanding of the glymphatic system to support the development of new therapies for diseases like Alzheimer’s.

Experimental Gene Therapy Targets Duchenne Muscular Dystrophy

This year, children in Rochester were among the first in the nation to receive an [experimental gene therapy](#) for Duchenne muscular dystrophy. Physician researchers from the department of Neurology and Golisano Children’s Hospital launched the trial, putting Rochester at the front of an accelerating trend of trials involving gene therapies that could transform how we treat many childhood neurological disorders.

Research on Treatments for Autoimmune Diseases

Leaders from the Department of Medicine were funded to join a [prestigious network of academic and clinical researchers](#), the National Institutes of Health Accelerating Medicines Partnership®: Autoimmune and Immune-Mediated Diseases program. The program is a collaborative effort between the NIH, FDA, pharmaceutical companies, and nonprofit organizations to study inflammation and autoimmune diseases. Our researchers will focus on the cellular and molecular interactions that lead to rheumatoid and psoriatic arthritis.

Major Grant Funds Research to Understand Key Features of OCD

A team of scientists from across the country, led by our department of Pharmacology & Physiology, will use a \$15 million award from the National Institute of Mental Health to investigate the brain networks central to [obsessive compulsive disorder](#). The five-year grant funds a Silvio O. Conte Center for Basic and Translational Mental Health Research at the University of Rochester; we’re one of only 15 Conte Centers in the U.S.

School of Arts, Sciences and Engineering

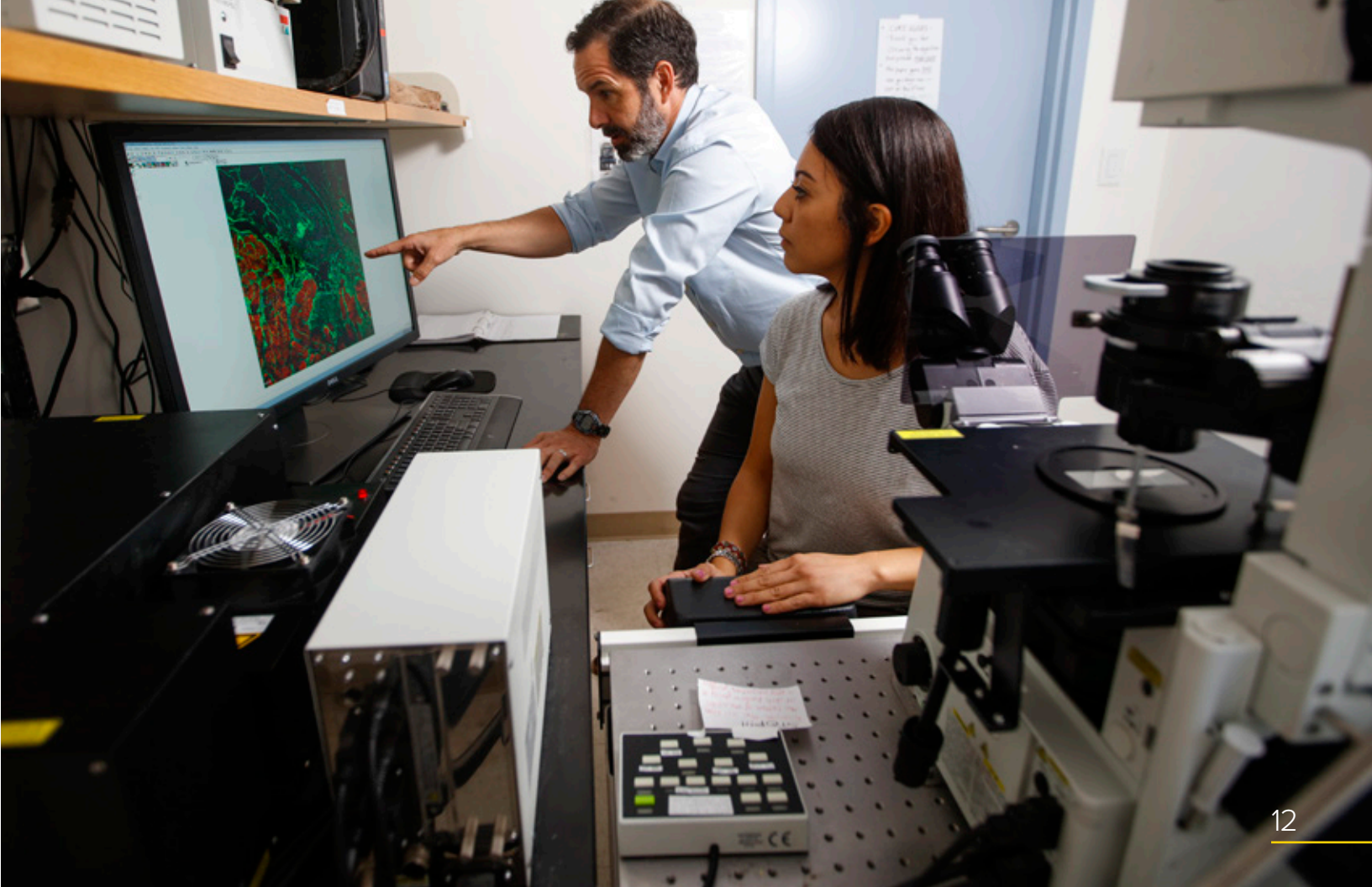
The Laboratory for Laser Energetics (LLE) is one of the leading research facilities in the world for investigating fusion energy and several areas of high-energy-density-physics (HEDP) such as plasma physics, high-energy-density materials, and astrophysics. In 2022 the lab secured \$83 million dollars for their OMEGA laser facility which is one of the most powerful lasers in the world. This grant is supporting cutting-edge nuclear fusion research that is being done by the U of R faculty, students, staff and their partners.

TEAMuP Project

University of Rochester leads the way in audio engineering - The TEAMuP project is a partnership between researchers from across four schools at the University of Rochester and Northwestern University’s McCormick School of Engineering. The project, which recently received a \$1.8 million grant from the National Research Foundation (NSF), is aimed at leveraging artificial intelligence to help musicians disseminate their art more effectively and independently. The team is working together to create an open-access framework that will facilitate collaboration between musicians and AI researchers to develop innovative solutions to some of the challenges faced in music production.

Project to Create Rapid Breakdown Biodegradable Plastics

Associate Professor Anne S. Meyer from the Biology department is a part of the Nereid Group, a collaboration of researchers from institutions and labs across the United States working to create biodegradable plastics that will break down faster and easier in our world’s oceans. Meyer recently secured \$1 million of a \$5 million grant awarded to the group that will support the work being done in her lab at the University of Rochester. Meyer and the members of her lab have created an original 3D printer, which enables them to print living bacteria that can be used on plastics to facilitate the rate at which the biopolymer degrades.



Academic and Student Support

Ombudspersons:

The ombudspersons are faculty members who can provide confidential, impartial and independent advice to help graduate students address their concerns. The ombudspersons provide a resource for and information about institutional policies and act as facilitators to help students resolve their problems, connecting students with those who can help, accompanying the student in discussions of problems or issues with faculty or administrators, and acting as an informal mediator between the student and faculty or administrators.

- **Campus Libraries**
- **The CARE Network**
- **University Counseling Center**
- **The Interfaith Chapel**
- **Writing Center and Writing Speaking and Argument Program: AS&E**

Graduate writing support is offered through the Graduate Writing Project (GWP) and supports graduate students and postdocs from AS&E at any stage in their program, working on any kind of academic writing and research, from abstracts and article submissions to theses and dissertations. They offer a range of services designed for graduate-student writers at the University, including: writing groups, tutoring, writing boot camps, and writing workshops.

- **The Learning Center: AS&E**

The Learning Center offers 1:1 Academic Success Coaching to graduate students that are free, confidential, individual meetings. Your coach will discuss your concerns and then help you select and implement learning and self-management techniques to improve your academic performance and efficiency



Career Support and Outcomes

Career Centers

- The Greene Center: The School of Arts, Sciences and Engineering
careereducation.rochester.edu
- MyHub: School of Medicine and Dentistry
urmc.rochester.edu/education/graduate/myhub-professional-development.aspx

Each school at the University of Rochester offers extensive services to support the career development needs of their master's and doctoral students. They can help you with personalized approach to exploration from your first year on campus all the way to your transition to a career after degree completion with access to employers seeking graduate level candidates.

Some of the resources provided by these centers are listed below

- Meliora Collective (connections with alumni)
- Networking events with alumni and employers
- Professional development seminars and workshops
- Handshake
- Internship & Job Shadowing Funding



Applying, Program List and REUs

Admission to graduate study at the University of Rochester is based on a holistic, program-based review of your application. Required materials and application deadlines vary depending on what program you are applying to, so it is important to review these requirements carefully before starting an application. Most programs begin at the end of August, and it is recommended that you apply by December of the previous year. Applications typically open in Mid-August.

To Apply Create an Account:
apply.grad.rochester.edu/apply

General Application Material Requirements

- Unofficial Transcripts
- Statement of Purpose
- 3 Letters of Recommendation
- Résumé/CV
- Program Specific Materials*
- Standardized Test Scores*

*The majority of the programs at the University of Rochester do not require any standardized test scores such as the GRE. You are encouraged to visit the specific program website to see if there are any additional materials, they require you to submit.

Financial Aid, Tuition Cost, and Funding

Graduate tuition and fees at the University of Rochester are comparable to other highly selective U.S. private institutions.

Each academic department reviews applications for grant, fellowship, and scholarship assistance. These amounts are awarded by specific departments and incorporated into your offer letter.

PhD Applicants:

All of our PhD programs offer full tuition support plus a generous stipend and individual health plan coverage.

Master's Applicants:

All of our master's applicants are considered for partial tuition scholarships based on academic merit. Many of our master's programs may be completed in one year or can be extended to two years with the addition of an internship, co-op, or research experience.

Programs

Engineering

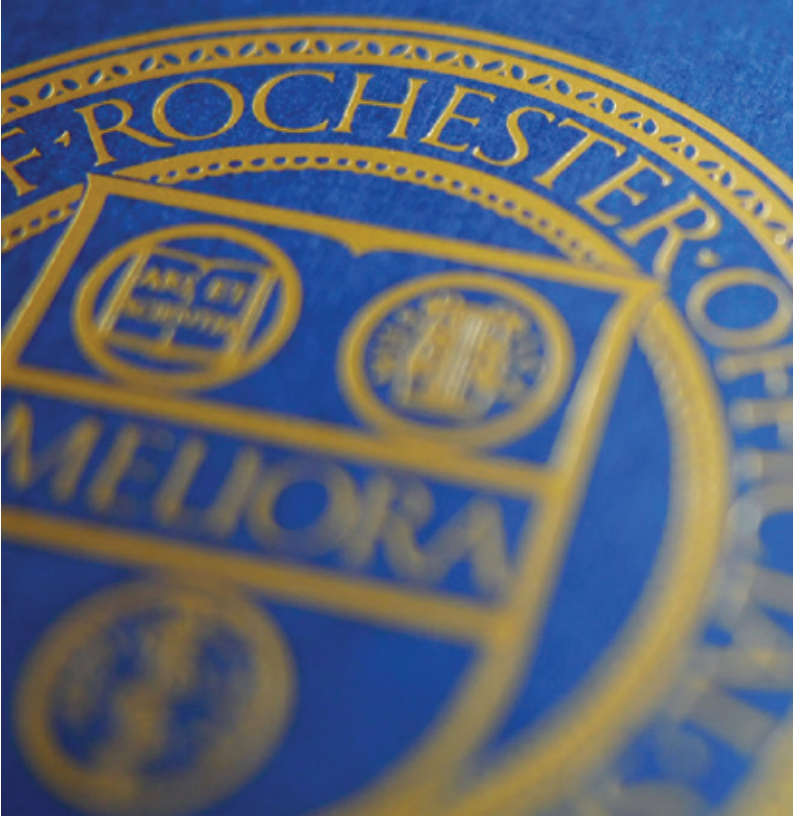
- Biomedical Engineering (MS, PhD)
- Chemical Engineering (MS, PhD)
- Material Science (MS, PhD)
- Electrical Engineering (MS, PhD)
- Mechanical Engineering (MS, PhD)
- Computer Science (MS, PhD)
- Optics (MS, PhD)
- Technical Entrepreneurship and Management (MS)
- Diagnostic Imaging (MS)

Biological and Biomedical Sciences

- Biochemistry and Molecular Biology (PhD)
- Biomedical Genetics and Genomics (PhD)
- Biophysics, Structural, & Computational Biology (PhD)
- Cellular & Molecular Pharmacology & Physiology (PhD)
- Genetic Counseling (MS)
- Immunology, Microbiology & Virology (PhD)
- Medical Pharmacology (MS)
- Neuroscience (PhD)
- Pathology – Cell Biology of Disease (PhD)
- Toxicology (PhD)
- Translational Biomedical Science (PhD)

Health Sciences

- Biostatistics (MS)
- Clinical Investigation (MS)
- Epidemiology (PhD, MS)
- Health Services Research Policy (PhD, MA)
- Public Health (MPH)
- Statistics (PhD, MA)



Natural Sciences

- Biology (MS, PhD)
Molecular, Cellular, and Developmental Biology or Evolution, Ecology, Genetics, and Genomics
- Chemistry (PhD)
- Physics (PhD)
- Mathematics (PhD)
- Brain and Cognitive Science (PhD)
- Geosciences (MS, PhD)
- Data Science (MS)

Social Sciences

- Clinical Psychology (PhD)
- Developmental Psychology (PhD)
- Social/Personality Psychology (PhD)
- Marriage and Family Therapy (MS)
- Political Science (PhD)
- Economics (PhD)
- Linguistics (MA, PhD)
- Language Documentation and Description (MA)
- Computational Linguistics (MS)
- History (MA, PhD)
- Medical Humanities (MS)

Humanities

- Philosophy (MA, PhD)
- Visual and Cultural Studies (PhD)
- English (MA, PhD)
- Literary Translation (MA)

Research Experience for Undergraduates (REU)

The University of Rochester provides several opportunities for undergraduates from schools throughout the country to come to our campus over the summer and participate in exciting research. Students join our programs with a desire to explore research as a career and they leave with mentorship and skills to pursue what matters to them – both inside and outside the classroom.

Arts, Sciences and Engineering

AS&E has NSF REUs in Chemistry, Data Science, Electrical & Computer Engineering, and Physics.

rochester.edu/College/kearnscenter/undergraduate/reu/index.html

Details

- \$6,000 stipend with travel, room and board covered
- Programs run from late May to late July
- Applications open in December and close in February
- One-credit graduate school prep course included
- GRE test prep course included
- Community building and professional development events

School of Medicine and Dentistry

Post-baccalaureate Research Education Program (PREP Program)

The University of Rochester Medical Center School of Medicine and Dentistry continually strives to diversify student and faculty populations and thus to increase the number of graduate students historically excluded from and underrepresented in the biomedical and health sciences. The Post-baccalaureate Research Education Program (PREP) is designed to encourage underrepresented minorities, students from disadvantaged backgrounds and students with disabilities, to pursue a research doctorate and to prepare trainees for careers as outstanding research scientists and leaders in the biomedical community. The PREP Program offers a generous stipend and health insurance.

prep.urmc.edu

Summer Scholars Program

The Summer Scholars program is intended to offer a research experience to students from groups currently underrepresented in the biomedical and health sciences. The program accepts applications from undergraduate students interested in a PhD degree in the Biomedical Sciences. Students spend 10 weeks engaged in research with a faculty mentor. The Summer Scholars Program provides a generous stipend and housing.

summerscholars.urmc.edu

Connect with us

Arts, Sciences and Engineering

rochester.edu/college/gradstudies/index.html

Contact

Email: graduate.admissions@rochester.edu

Phone: (585) 273-5210

Social Media

Instagram: [UR_ASEGRAD](https://www.instagram.com/UR_ASEGRAD)

Facebook: [facebook.com/URASEGrad](https://www.facebook.com/URASEGrad)

School of Medicine and Dentistry

urmc.rochester.edu/education.aspx

Contact:

Email: gradadm@urmc.rochester.edu

Phone: (585) 275-4522

Social Media

Instagram: [urochester_smd](https://www.instagram.com/urochester_smd)

Facebook: [facebook.com/urochestermed](https://www.facebook.com/urochestermed)

LinkedIn: [urochester-school-of-medicine](https://www.linkedin.com/company/urochester-school-of-medicine)

Twitter: [urochester_smd](https://twitter.com/urochester_smd)



