



UNIVERSITY of
ROCHESTER



ENGINEERING

The School of Engineering and Applied Sciences offers degrees in the following:

Laboratory for Laser Energetics (L.L.E.)

Only at Rochester...

www.enrollment.rochester.edu/admissions/learning/other.shtm

Research universities with high-ranking engineering programs	Externally Funded Research Expenditure (in millions)	Undergraduate Engineering Enrollment	Teaching, Tenure Track Engineering Faculty	Expenditures per Engineering Undergraduate	Engineering student to-Engineering faculty ratio
Rochester	\$88	592	67	\$148,711	9:1
Cornell	\$107	2,926	243	\$36,908	12:1
Hopkins	\$56	1,372	130	\$41,484	11:1
Wash U	\$19	1,139	91	\$17,260	13:1
RPI	\$82	3,008	142	\$27,312	21:1
Carnegie Mellon	\$161	1,548	134	\$104,353	12:1

source: www.asee.org (2007 Engineering College Profiles)

Graduate Engineering At Rochester (GEAR)

- Biomedical Engineering (B.S., M.S., Ph.D.)
- Chemical Engineering (B.S., M.S., Ph.D.)
- Computer Science (B.S., M.S., Ph.D.)
- Electrical and Computer Engineering (B.S., M.S., Ph.D.)
- Materials Science (M.S., Ph.D.)
- Mechanical Engineering (B.S., M.S., Ph.D.)
- Optics (B.S., M.S., Ph.D.)

Laboratory for Laser Energetics (L.L.E.) is a unique setting where scientists study laser fusion, where atoms of hydrogen are heated so fast by a giant laser that they fuse, creating bursts of energy - the same process that powers the sun and other stars. LLE is the largest unclassified laboratory of its kind in the nation.

- **Take Five Scholars Program** – originally started for engineering students, selected undergraduates enroll in a tuition-free fifth year to more deeply explore a project of their own design.
- **The world-renowned Eastman School of Music** – not just for music majors. Take private instrumental or vocal lessons at Eastman for academic credit and enjoy all that the School and Theatre have to offer year-round.
- **Undergraduate research and teaching** – Technologies developed at the University of Rochester are among the most productive in the nation, according to a report by the Association of University Technology Managers (AUTM). For the sixth year in a row, the University is among the top ten institutions in the nation in terms of the amount of royalty revenue it receives from its licensed technologies.

3-2 B.S./M.S. Engineering and Applied Sciences Program

Guaranteed admission into one of seven M.S. Engineering programs at Rochester's School of Engineering and Applied Sciences. Advantages include:

- Guaranteed admission into M.S. programs for exceptional undergraduate students
- Guaranteed 50% tuition award in fifth year of study
- Five year plan provides more flexibility in schedule
- Faculty mentors
- Extra M.S. specific academic advisement
- Extensive research, internship, and teaching opportunities
- Early career, networking, and professional development opportunities

The School of Engineering and Applied Sciences... an algorithm for success.

www.seas.rochester.edu/SEAS

Biomedical Engineering (B.S., M.S., Ph.D.)

www.bme.rochester.edu

- Medical optics
- Cell and tissue engineering
- Biomechanics
- Bioinstrumentation and imaging

Chemical Engineering (B.S., M.S., Ph.D.)

www.che.rochester.edu

- Research in Advanced Materials, Biotechnology, Clean Energy, and Nanotechnology
- Nanotechnology helps convert cassava into a sustainable ethanol for Mozambique
- Turn raw materials into usable commodities

Computer Science (B.A., B.S., M.S., Ph.D.)

www.cs.rochester.edu

- Small undergraduate classes, with a 4:1 student faculty ratio
- Research opportunities offered as early as freshman year
- Excellent opportunities for graduates: 20% of our students go to graduate school, and nearly all the rest obtain positions at Google, Microsoft, IBM, Intel, and other top-tier high-tech companies.

Electrical and Computer Engineering (B.S., M.S., Ph.D.)

www.ece.rochester.edu

- Facilities include Advanced Computer Architecture Laboratory, Laboratory for Advanced Integrated Circuits and Systems Sonoelasticity/3D-4D Imaging, and Music Research Lab.
- Current undergraduates are conducting research in mixed signal circuits, and image-based sensor networks.

Mechanical Engineering (B.S., M.S., Ph.D.)

www.me.rochester.edu

- Research conducted in Applied Mechanics, Biomechanics, Fusion/Plasma/HEDP, and Materials Science
- Facilities include: Center for Optics Manufacturing, Laboratory for Laser Energetics, X-Ray Diffractometer, and Nanoindenter.

Optics (B.S., M.S., Ph.D.)

www.optics.rochester.edu

- Research Experience in Optical Science and Engineering for Undergraduates (REU): 10 to 12 undergraduates undertake supervised research projects in the Institute of Optics, for 10 weeks each summer in diverse experimental and theoretical areas of optics and engineering. Past undergraduate research has been published in journals and presented at national conferences.

Robert B. Goergen Hall for Biomedical Engineering and Optics

After opening in the spring of 2007, the River Campus' new engineering building has enhanced the learning experience for students across majors, uniting engineering with other departments in the 101,100 square foot complex.

- Five-story, 1,800-square-foot Munnerlyn Atrium
- 150-seat Sloan Auditorium
- Two 24-seat teaching labs
- 28 research labs

Also...

- 70% of the building's construction waste was recycled.
- 85% of the regularly occupied space receives natural light.
- A bioretention basin controls runoff as well as adding a green space at the building entrance.
- Heating and cooling system performs at 20% above accepted standards.
- Paneling from renewable Bamboo



UR-SEAS Graduate programs are nationally ranked #30 by
US News and World Report's 2008 America's Best Graduate Schools!

The College (Arts, Sciences, and Engineering)

Study what you love.

The University of Rochester is one of America's great research universities, and has the College at its heart. The Rochester Curriculum—unique in higher education—has no required subjects. Instead, students build their learning around individual interests and passions. They pursue a major in one of the three great divisions of knowledge—humanities, social sciences, or natural sciences and engineering—and complete a cluster of three or more related courses in the two areas outside their major. The result is a liberal arts education that reflects individual choices and priorities. The Rochester Curriculum invites students to study what they love.

Life outside the classroom follows these same principles. In all aspects of campus life—in our 220 student clubs and organizations, in everything from athletics to cultural groups to debate—we value diversity and social responsibility, nurture educational excellence, and advance students' autonomy.



Graduate Engineering At Rochester Program

What is GEAR?

The Graduate Engineering At Rochester Program (GEAR) provides selected students with an assurance of admission into one of the engineering Masters programs at the School of Engineering and Applied Sciences and the Department of Computer Science:

- Biomedical Engineering
- Chemical Engineering
- Computer Science
- Electrical and Computer Engineering
- Material Science
- Mechanical Engineering
- Optics

Advantages of the GEAR Program

- Guaranteed admission into M.S. programs for exceptional undergraduate students
- Guaranteed 50% tuition award in the fifth year of study
- Five year plan provides more flexibility in schedule
- Faculty mentors
- Extra M.S. specific academic advisement
- Extensive research, internship, and teaching opportunities
- Early career, networking, and professional development opportunities

Applying to GEAR

Candidates for GEAR will generally fit the following profile:

- Unweighted grade-point average of 3.7
- Rank in the top 10% of their graduating class (for schools that rank their students)
- Strong performance on SAT Reasoning or ACT exams.
- Scores of 650 or higher on select SAT Subject tests. Although these exams are not required, GEAR applicants are strongly encouraged to take Science and Math subject exams that demonstrate their interest in a specific engineering field. (For example: for Chemical Engineering, Subject exams in Chemistry and Math level 1 or level 2 would be sufficient.)
- Coursework at the highest levels available (Honors, Advanced Placement, International Baccalaureate, or college classes). Most GEAR students would have completed one year of calculus.
- Extracurricular and summer activities that include both engineering and non-engineering interests such as Science Talent Search, FIRST Robotics, or Science/Math Bowl.

To apply for GEAR, complete the Common Application, Rochester's Common Application Supplement, and the GEAR Supplement. Applicants will be notified in early spring if they're being offered a GEAR interview. These interviews are necessary for the assurance of admission into the program. Interviewees will receive notification within two to three weeks of our decision. Those who are not offered interviews will still be considered for regular admission to the University.

For more information about GEAR, visit www.enrollment.rochester.edu/admissions/apply/gear.

Want to learn more?

Visit: www.enrollment.rochester.edu/admissions



For additional information about the University of Rochester,
please contact:

Office of Admissions
University of Rochester
P.O. Box 270251
Rochester, New York 14627-0251
Telephone: (585) 275-3221 or (888) 822-2256 (toll free)
Website: www.enrollment.rochester.edu/admissions
E-mail: admit@admissions.rochester.edu
