

# HOW TO APPLY

Applications to the Master of Engineering program for the academic year will be accepted through March 31, 2017. Applicants to the part-time graduate study program may apply through May 5, 2017.

## Apply online at <http://m.eng.cooper.edu>

Please submit the following supplemental information **no later than March 31, 2017** to the Office of Admissions, The Cooper Union, 30 Cooper Square, New York, NY 10003. **Materials may also be sent to [admissions@cooper.edu](mailto:admissions@cooper.edu).**

Please make the subject line of your email "Graduate Engineering Supplemental Information."

## APPLICATION REQUIREMENTS:

- B.E. or B.S. in an engineering discipline
- Official copies of school transcripts. This includes secondary (high school), college and university work
- GRE scores (optional)
- TOEFL scores (if bachelor's degree was taught in a language other than English)
- Two letters of recommendation
- Résumé (see below for detailed information)
- In a separate document, please submit a résumé, listing any professional licensure or certification along with a statement indicating what areas within engineering you seek to study.

Be sure to outline any relevant academic honors or awards, teaching or work experiences, internships, publications, research, projects, websites, patents, or other evidence of creative scholarship.

## GRADUATION REQUIREMENTS

The degree is comprised of 30 total credits beyond the baccalaureate. Students may complete the requirements in one of two ways: either the thesis option requiring 24 credits of course work and a 6-credit thesis or the non-thesis option, requiring 30 credits of course work along with a special project requirement.



# MASTER OF ENGINEERING PROGRAM

**THE COOPER UNION  
ALBERT NERKEN  
SCHOOL OF ENGINEERING**



**A**dvance your career by enrolling in an intensive Master of Engineering (M. Eng.) program in downtown Manhattan, an epicenter for innovation, technology and design. The Albert Nerken School of Engineering, part of The Cooper Union for the Advancement of Science and Art, offers an M.Eng. degree that will enable you to pursue highly technical and managerial positions or a Ph.D. at a top research institution. Graduates of Cooper Union include a Nobel Prize Winner in Physics and 33 Fulbright scholars.

## HIGHLY SELECTIVE, RIGOROUS, PRACTICAL

The Cooper Union, established in 1859, is a small highly selective university in Manhattan. It is among the nation's oldest and most distinguished institutions for higher education known nationally for its rigorous fundamentals, research grounding and project-oriented curriculum. Translating thinking into making is an ethos echoed across the creative culture of Cooper's engineers, artists and architects.

High-performing students admitted to any of the School's four departments—chemical, civil, electrical and mechanical—benefit from continuous access to leaders in both industry and academia in an intimate learning environment. All students are encouraged to consider such factors as sustainability, economics and teamwork through their coursework.

## NEW YORK CITY

The Albert Nerken School of Engineering is intimately involved with the New York metropolitan area. Sometimes, the city and its infrastructure are used as a laboratory. The school also draws on the region's abundant talent and resources, including an outstanding array of engineers and scientists employed at major corporations, governmental agencies and consulting firms in the New York region. The school calls on physicians, lawyers and other specialists to collaborate on research and mentoring and to give unique insights into contemporary problems and social issues confronting modern engineers. Many of these professionals are alumni and often serve as adjunct faculty members lending a dynamism to the classroom.

## DIVERSE OPPORTUNITIES

Our graduates have gone on to complete doctoral degrees at top-tier institutions like MIT, Stanford, Harvard, Columbia, Yale and Georgia Tech. and medical degrees at NYU School of Medicine, Icahn School of Medicine. They are also actively recruited by Fortune 500 companies and start-ups alike for their consistent ability to solve societal issues through responsible technological innovation.

Admission into the M.Eng. program is highly competitive and based primarily on superior undergraduate performance, industry/research experience, strong evidence of independent, creative thought, and extracurricular activities using technology to solve problems facing contemporary society.



## CHEMICAL

Graduate students in the Department of Chemical Engineering focus on courses that advance fundamental principles such as: transport phenomena, thermodynamics, and chemical reaction engineering. Students develop their creative abilities through project work and are encouraged to explore fields such as biomedical engineering, biochemistry, pharmaceuticals and bioengineering, nanotechnology, environmental engineering and sustainability.

In addition to advanced courses in chemistry and chemical engineering, graduate students in the thesis option carry out research under the guidance of full-time faculty members from either the chemistry or chemical engineering department.

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### SPECIALIZATION AREAS:

Process simulation, sustainability, nanomaterials, particle technology and fluidization, pharmaceutical engineering, pollution prevention and mitigation, process optimization and economics, green engineering.

### EMPLOYERS OF OUR GRADUATES:

ExxonMobil, Infineum, Merck, Phillips, PepsiCo, CDI and Consolidated Edison. Other graduates have gone on to earn doctoral degrees from leading universities across the country.



## ELECTRICAL

Developing their capacities for both team and individual work, graduate students in the department of electrical engineering work with practicing professionals, faculty and peers on a variety of cutting-edge problems. Students are provided with tools to address engineering problems, based on a strong theoretical foundation and scientific computation.

Students work with faculty exploring a diverse array of subjects, including audio and image processing, electronics design, machine learning and artificial intelligence, parallel and distributed processing, RF engineering and wireless communications, and sustainable engineering.

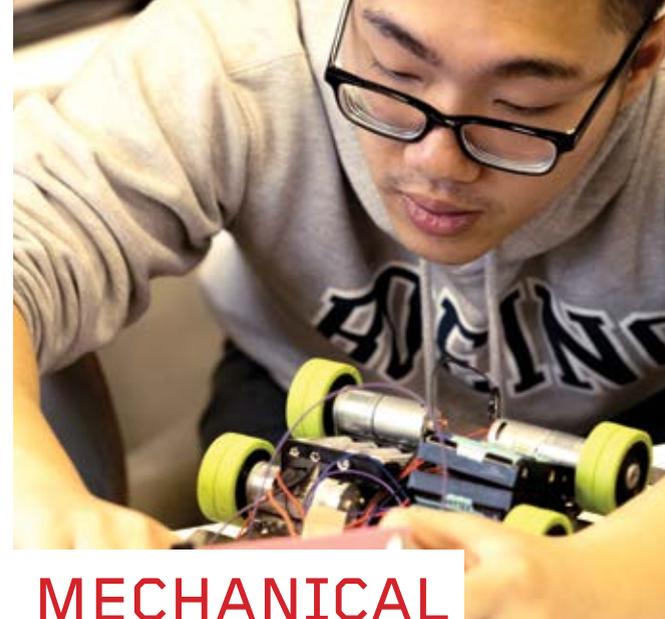
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### SPECIALIZATION AREAS:

Electronic systems and materials, signal processing and communications, and computer engineering.

### EMPLOYERS OF OUR GRADUATES:

Alcatel-Lucent, Bloomberg LP, Goldman Sachs, Google, The Hackerati, ITT Exelis, LGS Innovations, Maxentric Technologies, Mini-Circuits, Nvidia, Spotify, Southwest Research Institute, SRI International



## MECHANICAL

Through course projects, research, and consulting opportunities, graduate students in the Department of Mechanical Engineering explore design innovations, robotics, mechatronics, energy and sustainability, nanotechnology, dynamic systems and control, biomedical engineering and cutting-edge computational methods. Courses balance analytical rigor and creative design, thereby preparing graduates for a variety of careers.

Graduates are valued for their strong project-based design skills and analytical abilities. They have successful careers as entrepreneurs and innovators in the aerospace, automotive, biomedical, energy and construction industries. They often pursue doctoral studies in a range of mechanical engineering fields.

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### SPECIALIZATION AND RESEARCH AREAS:

Computer-aided design and engineering, computational fluid dynamics, combustion, refrigeration, robotics, biomedical systems, respiratory biomechanics, automotive systems, mechatronics, thermoelectric power generation, energy-efficient buildings, vibrations and acoustics.

### EMPLOYERS OF OUR GRADUATES:

Arup, Boeing, Bloomberg LP, Consolidated Edison, Credit Suisse, Exxon, General Dynamics, General Motors, Google, Honda, IBM, Merck, NASA, Raytheon, Southwest Research Institute, SpaceX, Stryker, United States Patent and Trademark Office



## CIVIL

Graduate students in the department of civil engineering become equipped with the theoretical and practical knowledge needed to solve many problems facing both our built and natural environments. Coursework grounded in the principles of mathematics, structural mechanics and computer applications prepares students for careers in urban planning, structural engineering, construction management and infrastructure rehabilitation.

To augment the major curriculum, graduate students have the opportunity to declare minors varying from computer engineering to civil engineering management. Students and faculty often collaborate on projects related to sustainability, alternative energy sources and the mitigation of damage caused by natural and man-made disasters.

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### SPECIALIZATION AREAS:

Structural and geotechnical, water resources and environmental engineering

### EMPLOYERS OF OUR GRADUATES:

Thornton Tomasetti, Arup, Mueser Rutledge, Weidlinger Associates, Skanska, Gilbane, Port Authority of New York & New Jersey, NYC Department of Design and Construction