JOIN COLUMBIA ENGINEERING AND MAKE AN IMPACT

GRADUATE STUDIES
Columbia University, founded in 1754 as King’s College, is one of the most distinguished universities in the world. The highly selective Fu Foundation School of Engineering and Applied Science has been educating leaders since its founding as the School of Mines in 1864. From its beginning, Columbia Engineering contributed to the growth of a rapidly industrializing nation. Its graduates and faculty have transformed entire industries with developments including steamboat technology, early mechanical tabulators, medical X-ray technology, and FM radio, and have led such ground-breaking projects as New York’s first subway system and the world’s first nuclear submarine.

Today, Columbia Engineering is building on its tradition of pushing the frontiers of engineering to address the key needs of humanity with a vision — Columbia Engineering for Humanity – which highlights the School’s goal of advancing innovative research that will have a positive impact on humanity – a sustainable, healthy, secure, connected, and creative humanity.

Columbia Engineering occupies three classroom and laboratory buildings at the north end of the Morningside campus, including the Schapiro Center for Engineering and Physical Science Research. Students have ready access to all of the University’s resources, and are a 20-minute walk from Columbia’s new Manhattanville campus where the Jerome L. Green Science Center, Mortimer B. Zuckerman Mind Brain Behavior Institute, and the Lenfest Center for the Arts are located. Students also have access to the rich resources of New York City, where a broad range of social, cultural, and business communities offer an unparalleled opportunity for students to expand their horizons and deepen their understanding of almost any human endeavor imaginable.
The Fu Foundation School of Engineering and Applied Science academic departments are among the nation’s oldest and most influential programs that embrace new technologies and interdisciplinary possibilities. The following graduate degrees are offered: Master of Science (M.S.), M.S. leading to Ph.D. (M.S./Ph.D.), Doctor of Philosophy (Ph.D.), and Doctor of Engineering Science (Eng.Sc.D.).

### Applied Physics and Applied Mathematics:
Graduate degrees are offered in four areas: applied physics, applied mathematics, materials science and engineering, and medical physics.

www.apam.columbia.edu  seasinfo.apam@columbia.edu

### Biomedical Engineering:
Primary research areas combine basic engineering with physical and biological sciences in biomechanics, cell and tissue engineering, biomedical imaging, and neural imaging.

www.bme.columbia.edu  zc2306@columbia.edu

### Chemical Engineering:
This department is continuously evolving in modern technology and fundamental science. Areas of research include molecular design and modification of material surfaces, soft materials science of synthetic biological systems, cell biology and disease, genomic engineering, interfacial engineering and electrochemistry, and protein and metabolic engineering.

www.cheme.columbia.edu  kmm2270@columbia.edu

### Civil Engineering and Engineering Mechanics:
Graduate degrees in this department are flexible with concentrations in structures, construction, reliability and random processes, soil mechanics, fluid mechanics, and continuum and computational mechanics.

www.civil.columbia.edu  kelly@civil.columbia.edu

### Computer Engineering:
The program combines key aspects of electrical engineering and computer science. Students learn the fundamentals of circuits, systems, and software associated with design of programmable systems as used for general purpose computing, communications, control or signal processing.

www.compeng.columbia.edu  info@ee.columbia.edu

### Computer Science:
Concentration tracks for this department are computational biology, computer security, foundations of computer science, machine learning, natural language processing, network systems, software systems, and vision and graphics. A dual M.S. is offered with the School of Journalism.

www.cs.columbia.edu  ms-admissions@cs.columbia.edu

### Data Science:
The Data Science Institute at Columbia University, founded in 2012, is home to six centers including Cybersecurity, Financial and Business Analytics, Foundations and Data Science, Health Analytics, New Media and Smart Cities. DSI offers both a Certification in Professional Achievement and an M.S. program.

www.datascience.columbia.edu  datascience@columbia.edu

### Earth and Environmental Engineering:
This department strives to develop effective solutions to the sustainability of human society. Research and education components of EEE are water resources and climate risks, sustainable energy and materials, and environmental health engineering.

www.eee.columbia.edu  eee-coord@columbia.edu

### Electrical Engineering:
The main areas of research and teaching in the EE department are signal, data and information processing, communications and networking, integrated circuits and systems, micro devices and photonics, and systems biology and neuroengineering.

www.ee.columbia.edu  info@ee.columbia.edu

### Industrial Engineering and Operations Research:
The IEOR department offers graduate degrees in financial engineering, management science and engineering, industrial engineering, business analytics, and operations research.

www.ieor.columbia.edu  admit@ieor.columbia.edu

### Mechanical Engineering:
The department’s areas of study include biomechanics, mechanics of materials, fluid mechanics, heat transfer, control, manufacturing, energy systems, MEMS, and nanotechnology.

www.me.columbia.edu  mef2@columbia.edu