COLUMBIA ENGINEERING GRADUATE EDUCATION

http://gradengineering.columbia.edu
seasgradmit@columbia.edu

COLUMBIA UNIVERSITY HISTORICAL HIGHLIGHTS

- Founded in 1754 as King's College by a royal charter of King George II of England
- Columbia is the oldest institution of higher education in New York and the fifth oldest in the US
- In 1784, renamed Columbia University
- In 1897, moved to Morningside Heights at 116th Street and Broadway
- Currently expanding with 17-acre Manhattanville campus at 125th Street and Broadway
- Manhattanville will be home to Jerome L. Greene Science Center

THE NEW YORK ADVANTAGE

- Campus in the Morningside Heights neighborhood of Manhattan
- New York City is a major headquarter for high-tech research/development, finance and more
- Strong Columbia alumni network: *Facebook: Columbia: @ColumbiaAlumniA; SEAS: @myceaa*
- Long tradition of collaboration with private industry and public sector (jobs, internships, networking)

COLUMBIA SCHOOLS

- Architecture, Planning and Preservation
- College of Physicians and Surgeons
- Columbia College
- Graduate School of Arts and Sciences
- Graduate School of Business
- School of the Arts
- School of Continuing Education
- School of Dental Medicine
- **School of Engineering and Applied Science**
- School of General Studies
- School of International and Public Affairs
- School of Journalism
- School of Law
- School of Nursing
- School of Public Health
- School of Social Work

ABOUT COLUMBIA ENGINEERING

- Columbia University founded in 1754 as Kings College
- School of Mines founded in 1864
- Columbia Engineering renamed in 1997 in recognition of Z.Y. Fu, a major benefactor
- In the forefront of collaborative research and teaching
- Columbia Engineering faculty and students are responsible for major accomplishments *(FM radio, the first x-ray photograph taken in America, mass production of antibiotics, and first robots)*
- A core part of Columbia's major interdisciplinary endeavors: *Columbia Nano Initiative, Data Science Institute, Zuckerman Mind Brain Behavior Institute, Precision Medicine Initiative, Freedom of Expression initiative*

THE ENGINEERING RENAISSANCE

Engineering transforms every aspect of life

- Energy, Water, Air, Environment, Food, Shelter, Mobility, Communication, Safety, Health, Medicine

Engineering is informed by and informing every other discipline

- Science, Humanities, Arts, Medicine, Public Health, Policy, Law, Business, Journalism, Architecture, International and Public Affairs, Social Work

THE ELEMENTS OF *COLUMBIA ENGINEERING FOR HUMANITY*

- Sustainable Humanity
- Healthy Humanity
- Secure Humanity
- Connected Humanity
- Creative Humanity

COLUMBIA FACULTY & STUDENTS: CREATIVE, DIVERSE, INNOVATIVE

- Creativity is sparked by an environment that values diversity
- Columbia embraces and celebrates diversity
- We are part of Columbia University in the City of New York
- New York is the most diverse, exciting, and creative city in the world!

COLUMBIA ENGINEERING ALUMNI

James Albaugh
Civil Engineering
MS (1974)

President
BOEING

Shawn Edwards
Electrical Eng
BS (1990), MS (1995)

CTO
Bloomberg

Qi Yin
Computer Science
MS (2013)

CEO & Co-Founder
FACE++ inside

Anne Gates
Operations Research
MS (1982)

CFO & Vice President
Walt Disney

COLUMBIA ENGINEERING ALUMNI

Shahram Ebadollahi
Electrical Eng
MS (1999), PhD (2005)

VP of Innovation
Chief Science Officer
IBM Watson Health

Fermi Wang
Electrical Eng
MS (1981), PhD (1991)

Co-founder & CEO
Ambarella Inc. HD and UHD Video Processing

Angeliki Frangou
Mechanical Eng
MS (1988)

CEO
Navios Maritime

Marshall Cox
Electrical Eng
PhD (2013)

CEO & Founder
Radiator Labs

COLUMBIA ENGINEERING ALUMNI

Ursula Burns

Mechanical Eng

MS (1982)

CEO

xerox

Michael Massimino

Industrial Eng

BS (1984)

Astronaut

NASA

Jonathan Rosenberg

Electrical Eng

PhD (2001)

VP and CTO

cisco

Vikram Pandit

Electrical Eng

BS (1976), MS (1977)

Former CEO

citigroup

COLUMBIA ENGINEERING ALUMNI

John Oringer
Computer Science
MS (1999)

CEO & Founder

shutterstock™

Regina Barzilay
Computer Science
PhD (2003)

MIT Professor
MacArthur Genius (2017)

MIT

Alvin Roth
Operations Research
BS (1971)

2012 Nobel Laureate
Economics

Robert C. Merton
Operations Research
BS (1966)

1997 Nobel Laureate
Economics

COLUMBIAN NOBEL LAUREATES

2017 Nobel Prize in Chemistry Awarded to Professor Joachim Frank

Developed cryo-electron microscopy for the high-resolution structure determination of biomolecules in solution.

2018 Nobel Prize in Physics Awarded to Dr. Arthur Ashkin

Produced groundbreaking research in laser physics, including optical tweezers that grab particles, atoms, viruses and other living cells with their laser beam fingers.

EDUCATIONAL PATH FOR LEADERS

- Technical depth
- Columbia's famed liberal arts core curriculum
- Research opportunities
- Global opportunities
- Internship opportunities
- Entrepreneurship mentoring and programming

GRADUATE ENGINEERING ENROLLMENT & PROFILE

- **2,100 Engineering Graduate students**
- **77% International students:**
  Brazil, Canada, Chile, China, France, Germany, Greece, India, Italy, Mexico, Spain, South Korea, Switzerland, Turkey, UK
- **34% PhD and 66% MS**

US NEWS AND WORLD REPORT RANKING

#3 in 2019 University Rankings

2019	College
1	Princeton
2	Harvard
3	**Columbia**
	University Of Chicago
	M.I.T.
	Yale
7	Stanford
8	U. Penn
	Duke

#1 Engineering School in the Ivy League

WORLD CLASS MS PROGRAMS

Department of Industrial Engineering & Operations Research

- MS in Financial Engineering
- MS in Business Analytics **(NEW)**
- MS in Operations Research
- MS in Management Science & Engineering
- MS in Industrial Engineering (Systems Engineering)

Department of Electrical Engineering

- MS in Electrical Engineering

Department of Computer Science

- MS in Computer Science

Department of Civil Engineering & Engineering Mechanics

- MS in Construction Engineering and Management
- MS in Civil Engineering/Engineering Mechanics/Structural Engineering

MS in Computer Engineering

WORLD CLASS MS PROGRAMS

Department of Chemical Engineering

- MS in Chemical Engineering

Department of Mechanical Engineering

- MS in Mechanical Engineering

Department of Applied Physics & Applied Math

- MS in Applied Math
- MS in Applied Physics
- MS in Materials Science & Engineering
- MS in Medical Physics

Department of Biomedical Engineering

- MS in Biomedical Engineering

WORLD CLASS MS PROGRAMS

Department of Earth & Environmental Engineering

- MS in Earth & Environmental Engineering

Data Science Institute

- MS in Data Science

IEOR Industrial Engineering & Operations Research COLUMBIA | ENGINEERING

FIVE DISCIPLINES

- Operations Research (MS & PhD)
- Financial Engineering (MS)
- Management Science & Engineering (MS)
- Business Analytics (MS) – NEW
- Industrial Engineering (Systems Engineering) (MS & PhD)

APPLICATION DEADLINES

PROGRAM TYPE	FALL ENTRY DEADLINE
Doctoral *MS/PhD, PhD*	Dec. 15
M.S. Programs	Jan. 6 to Feb. 15

Visit http://gradengineering.columbia.edu for more details

APPLICATION FOR ADMISSION

✓	Online Application Form and Fee ($85)
FILTERS	
✓	GRE
✓	TOEFL
REQUIREMENTS	
✓	All University Transcripts
✓	Three Recommendation Letters
✓	Resume or CV
✓	Personal Statement

VISIT COLUMBIA ENGINEERING AS AN UNDERGRADUATE STUDENT

COLUMBIA | ENGINEERING
The Fu Foundation School of Engineering and Applied Science

EXPERIENCE COLUMBIA ENGINEERING

The Columbia Engineering Undergraduate Visiting Student Program allows students to **broaden their college experience** and supplement the undergraduate program at their home schools by studying at Columbia for **up to two semesters.**

Students who are enrolled in a degree program at a university and **will have completed at least one year of college credit by the time of enrollment** can apply.

VISIT COLUMBIA ENGINEERING AS AN UNDERGRADUATE STUDENT

COLUMBIA | ENGINEERING
The Fu Foundation School of Engineering and Applied Science

The deadline for Fall 2019 is March 15, 2019

The deadline for Spring 2020 is October 15, 2019

To learn more and obtain list of application requirements visit **visitingprogram.engineering.columbia.edu**

CAREER PLACEMENT AND DEVELOPMENT

Columbia Engineering Career Placement Team
Center for Career Education
Columbia Engineering Professional Development & Leadership Program
Exclusive Internship and Full Time Opportunities
Graduate Student Affairs Events & Engineering Graduate Student Council
Alumni Mentorship

DEDICATED CAREER PLACEMENT SUPPORT FOR ALL PROGRAMS

Dr. Jenny Mak
Head of Graduate Career Placement
Head of Professional Development

Gerald Cotiangco
Business Analytics

Mercedes Gomez
Industrial Engineering
Operations Research

Ivy Elkins
Computer Science

Kristen Henlin
Applied Physics and Math,
Materials Science and
Biomedical Engineering

Mindi Levinson
Management Science
and Engineering

Emily McCormack
Civil Engineering
Mechanical Engineering

Rachel Fuld Cohen
Data Science

Dr. Tamar Hofer
Financial Engineering

Raina Ranaghan
Electrical Engineering
Computer Engineering

Irina Katz
Chemical Engineering
Earth & Environmental
Engineering

Columbia Engineering
Professional Development & Leadership Program

pdl.engineering.columbia.edu
PDL-seas@columbia.edu

PROFESSIONAL DEVELOPMENT SESSIONS

Training and Placing Engineering professionals and leaders.

High caliber instruction: 99%+ would recommend sessions to a friend.

ENGINEERING STUDENT ORGANIZATIONS

- Engineering Graduate Student Council (EGSC)
- Association for Computing Machinery (ACM)
- American Society of Civil Engineers (ASCE)
- American Society of Mechanical Engineers (ASME)
- Columbia Science Review (CSR)
- Columbia Venture Community (CVC)
- American Institute of Aeronautics and Astronautics (cuAIAA)
- Engineers Without Borders (EWB)
- Entrepreneurship, Leadership and Consulting Club (ELC)
- Institute of Electrical and Electronics Engineers (IEEE)
- Institute for Operations Research and the Management Sciences (INFORMS)
- Society of Automotive Engineers (SAE)
- Scientists & Engineers for a Better Society (SEBS)

And many more!

COMMUNITY BUILDING EVENTS

LIVING IN NEW YORK CITY: HOUSING

University Apartment Housing (UAH)
http://facilities.columbia.edu/housing/

Off-Campus Housing Assistance Office (OCHA)
http://www.columbia.edu/cu/ire/ocha/

International House
http://www.ihouse-nyc.org

STAY CONNECTED WITH COLUMBIA ENGINEERING

columbiaegsc

Soulaymane Kachani

@CUSEAS

@Columbia Engineering

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seasgradmit@columbia.edu

Brochures