MBA<sup>x</sup>MS
Dual MBA/Executive MS in Engineering and Applied Science
An **MBA**<sup>x</sup>**MS** in Engineering and Applied Science:

- Growing need for business leaders with technical skills
- 2 degrees from 2 top-ranked schools in < 2 years
- Amazing faculty + unique curriculum design
- Dynamic and diverse community of students
- Incredible resources for academic and career support
- Unmatched location in New York City
World-class knowledge
Shih-Fu Chang
Dean
Fu Foundation School of Engineering and Applied Science
Morris A. and Alma Schapiro Professor
Professor of Electrical Engineering and Computer Science

“We recognize how important it is to provide students with broad exposures to emerging technology breakthroughs.”

Costis Maglaras
Dean
Columbia Business School
David and Lyn Silfen Professor of Business

“This program allows students to move seamlessly from the classroom, to product development, to large-scale innovation.”
Program Directors

Garud Iyengar
Program Director
Tang Family Professor of Industrial Engineering and Operations Research
Senior Vice Dean of Research and Academic Programs
Fu Foundation School of Engineering and Applied Science

Ciamac Moallemi
Program Director
William Von Mueffling Professor of Business
Columbia Business School
Program Faculty

Harry West
Prof. of Professional Practice in Industrial Engineering and Operations Research
Teaches “Human-Centered Design and Innovation”

Lydia Chilton
Assistant Professor of Computer Science
Teaches “Design of UI/UX for connected systems”

Sam Sia
Professor of Biomedical Engineering
Teaches “Frontiers of Tough Tech”

Dan Wang
Associate Prof. of Business
Teaches “Technology Strategy”

Sheena S. Iyengar
S.T. Lee Prof. of Business
Teaches “Think Bigger”

Jorge A. Guzman
Associate Prof. of Business
Teaches “Entrepreneurial Strategy”

75+ Faculty Members
14 Areas of Study
Fall Semester

Human-Centered Design & Innovation •
Design of UI/UX for Connected Systems •
Frontiers of Tough Tech •
Fundamental Design Tools •
Foundations of Entrepreneurship *
Statistics + Business Analytics *

Spring Semester

Lead: People, Teams, Organizations *
Strategy Formulation *
Managerial Economics *
Global Economic Environment *
Marketing *
Financial Accounting *
Foundations of Valuation *
Corporate Finance *
Operations Management *
Analytics in Python •

*CBS  •  SEAS
Entrepreneurship Concentration

Work on your startup with funding provided by the program

Summer Term

Enterprise Concentration

Take a paid internship with a startup or an established technology company
Second Year Curriculum

- MBA Concentration
- MBA Innovation
- MBA Analytics
- MBA Free Electives
- MS Concentration
- MS Capstone
Complete an Engineering Concentration
Entrepreneurship Concentration
Classes include: Entrepreneurial Strategy; Entrepreneurial Finance; Launch Your Startup; Entrepreneurial Law for Startups; Starting and Running an Entrepreneurial Company, …

Enterprise Concentration
Classes include: Product Management; Technology Strategy; Operations Strategy; Economics of Organizational Strategy; Financial Planning and Analysis; Managerial Decision-Making, …

Fulfill a Business Concentration
Unmatched opportunities
Opportunities in New York City

Gain access to one of the most vibrant, expansive, and innovative business and entrepreneurial ecosystems in the world.
Distinguished Speakers and Conferences

Robert Smith
CEO of Vista Equity
MBA ’94

Arianna Huffington
Co-founder of
The Huffington Post,
the founder and CEO of
Thrive Global

Rocco Comisso
Chairman and CEO of
Mediacom
BS ’71, MBA ’75

Sunita Williams
American Astronaut and
United States Navy Officer

Asahi Pompey
Partner, Global Head of
Corporate Engagement,
Goldman Sachs
World-Class Resources

- Graduate Career Placement Team
- One-on-One Career Coaching
- Global Alumni Connections
- Innovative Professional Development Opportunities
- Student-Employer Engagements
- Professional Development and Leadership Fellows Program
- Career Management Center
- CMC Coaches / CMC Fellows
- Executives in Residence
- Columbia Build Lab
- Columbia Startup Lab
- Alumni Edge Program
- Columbia Alumni Virtual Accelerator
Successful Entrepreneurs
Recruitment by Top Employers

- Amazon
- Spotify
- eBay
- Apple
- Adobe
- Meta
- Microsoft
- Tencent
- IBM
- Google
- LinkedIn
- Salesforce
- Wayfair
- Hulu
Worldwide alumni network

49,000+
Columbia Business School Alumni

43,000+
Columbia Engineering Alumni

92,000+
Alumni Worldwide
Notable Alumni

Ursula Burns
MS '81
Former CEO of Xerox

Bob Bakish
BS '85, MBA '89
President and CEO of Paramount Global

Cyrus Massoumi
MBA '03
Founder of Zocdoc

Jon Stein
MBA '09
Founder and CEO of Betterment

Alicia Abella
PhD, Computer Science '95
Managing Director, Google Cloud

Bob Bakish
BS '85, MBA '89
President and CEO of Paramount Global

Cyrus Massoumi
MBA '03
Founder of Zocdoc

Jon Stein
MBA '09
Founder and CEO of Betterment

Alicia Abella
PhD, Computer Science '95
Managing Director, Google Cloud
Next steps
What We Look For

**Academic History**
- Undergraduate STEM degree
- Work experience (min. 2 yrs.)
- GMAT / GRE scores

**Personal Characteristics**
- Recommendations
- Essays
- Interview

**Alignment with Your Professional Goals**
- Interested in creating or joining a startup company
- Seeking an enhanced role at an established technology firm
- Expanding opportunities as a technical product manager
## Application Deadlines

<table>
<thead>
<tr>
<th>Application Due</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1: September 28, 2022*</td>
<td>Final decision expected by December 15, 2022</td>
</tr>
<tr>
<td>Round 2: January 11, 2023*</td>
<td>Final decision expected by April 1, 2023</td>
</tr>
</tbody>
</table>

*Applications are due by 11:59pm EST on the deadline.

Our first cohort will begin August 2023 and complete the program in May 2025.
Application Requirements

- Online Application
- Résumé
- 2 Essays
- 2 Letters of Recommendation
- Transcripts
- GRE or GMAT Scores
- Interviews by Invitation
- Application Fee
Merit-Based Fellowship

- Range from $20K to full tuition per year; renewable and can be combined with need-based scholarship with restrictions
- Awarded after admissions decisions
- Apply for admission by January 15, 2023; No separate application needed

Need-Based Scholarship

- Multi-step application process after admission
- Range from $10K–$30K per year; renewable

U.S. / International Student Loans

- Loans available up to the full financial aid budget less other aid
- No-cosigner international loan options available for up to 80% of the cost of attendance
Contact Us
apply@gsb.columbia.edu
212-854-1961

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@Cugradseas
@CUGradSEAS
@Columbia SEAS Grad Admissions Office
Thank you
### Medical Device Design
**9 Credits**
- Biomedical Innovation I
- Lab to Market
- Bioinstrumentation
- Drug and Gene Delivery
- Biomems

### Advanced Materials and Nanotechnology
**9 Credits**
- Nanotechnology
- Infrastructure Materials
- Microelectromechanical Systems
- Principles of Device Microfabrication
- Synthesis & Processing of Materials
- Ceramic Nanomaterials
- Electronic and Magnetic Properties of Solids
- Materials Science Laboratory
- Mechanical Properties of Structural Materials
- Ceramics & Composites
- Electrochemical Materials and Devices
- Thin Films and Layers
- Mechanics of Fracture and Fatigue
- Micromechanics of Composite Materials
- Fundamentals of photonics

### AI and Machine Learning
**9 Credits**
- Machine Learning
- Natural Language Programming
- Machine Learning for Functional Genomics
- Artificial Intelligence
- Unsupervised Machine Learning
- Machine Learning Theory

### Climate, Energy, and Sustainability
**9 Credits**
- Energy: Sources and Conversation
- Alternative Energy Resources
- Introduction to Atmospheric Science
- Electrochemical Energy Storage Systems
- Solar Fuels

### Robotics and Smart Machines
**9 Credits**
- Robotics
- Computational Aspects of Robotics
- Robot Learning
- Robotics Studio
- Machine Learning
- Computer Vision
- Advanced Kinematics, Dynamics, and Control in Robotics

### Software Systems
**9 Credits**
- Introduction to Databases
- Computer Networks
- Fundamentals of Large-scale Distributed Systems
- Computer Security 1
- Computer Security 2
- Database System Implementation

### Supply Chain, Retail and Service Systems
**9 Credits**
- Supply Chain Analytics
- Transportation Analytics and Logistics
- Dynamic Pricing and Revenue Management
- Service Engineering
- Healthcare Operations Management
- OR in Public Policy

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The master of science program is strongly oriented to collaborative research and a well-balanced program of study.

Your work will result in a broad grounding in your selected concentration, along with in-depth knowledge in your specific area of specialization.

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**APPENDIX**

**Engineering Concentration Courses**
Students who choose the entrepreneurship concentration will be given a summer stipend to assist them while they pursue their venture idea.

Students who pursue the enterprise concentration will obtain an internship with support from both the Engineering and Business School's Career Offices.

APPENDIX

Business Concentration Courses

Entrepreneurship Concentration
9 Credits
- Entrepreneurial Strategy
- Entrepreneurial Selling
- Entrepreneurial Law for Start-Ups
- Entrepreneurial Greenhouse
- Entrepreneurial Finance
- Foundations of Venture Capital
- Launch Your Startup
- Starting and Running an Entrepreneurial Company

Analytics Requirement
3 Credits
- Analytics in Action
- The Analytics Advantage
- Business Analytics II
- Marketing Analytics
- Demand and Supply Analytics
- People Analytics and Strategy
- Market Intelligence: Art & the Science
- Quantitative Pricing & Revenue Analytics
- Data Science for Marketing Managers
- Modern Econometrics for Business

Enterprise Concentration
9 Credits
- Product Management
- Technology Strategy
- Operations Strategy
- Economics of Strategic Behavior
- Economics of Organizational Strategy
- Financial Planning and Analysis
- Top Management Process
- Managerial Decision-making
- Power and Influence

Innovation Requirement
3 Credits
- Foundations of Innovation
- Think Bigger
- Napoleon's Glance
- The Corporate Innovator
- Innovate Using Design Thinking
• Advanced Kinematics, Dynamics, and Control in Robotics
• Alternative Energy Resources
• Artificial Intelligence
• Bioinstrumentation
• Ceramic Nanomaterials
• Ceramics & Composites
• Computational Aspects of Robotics
• Computer Vision
• Database System Implementation
• Drug and Gene Delivery
• Dynamic Pricing and Revenue Management
• Electrochemical Energy Storage Systems
• Electrochemical Materials and Devices
• Electronic and Magnetic Properties of Solids
• Energy: Sources and Conversation
• Fundamentals of Large-scale Distributed Systems
• Fundamentals of Photonics
• Healthcare Operations Management
• Infrastructure Materials
• Introduction to Atmospheric Science
• Introduction to Databases
• Lab to Market
• Machine Learning for Functional Genomics
• Machine Learning Theory
• Materials Science Laboratory
• Mechanical Properties of Structural Materials
• Micromechanics of Composite Materials
• Nanotechnology
• Natural Language Programming
• OR in Public Policy
• Principles of Device Microfabrication
• Robot Learning
• Robotics
• Service Engineering
• Solar Fuels
• Solar Thermal Engineering
• Supply Chain Analytics
• Synthesis & Processing of Materials
• Thin Films and Layers
• Transportation Analytics and Logistics
• Analytics in Action
• Applying Healthcare IT and Digital Health
• Business Analytics II
• Customer Management Concepts and Models
• Data Science for Marketing Managers
• Demand and Supply Analytics
• Digital Marketing
• Economics of Strategic Behavior
• Entrepreneurial Greenhouse
• Entrepreneurial Law for Start-Ups
• Entrepreneurial Strategy
• Executive Ethics
• Financial Planning and Analysis
• Foundations of Innovation
• Foundations of Venture Capital
• Innovate Using Design Thinking
• Intro to Databases for Business Analytics
• Investing in Medical Technologies
• Launch Your Startup
• Lean Launchpad
• Managerial Decision-making
• Managerial Negotiations
• Market Intelligence: The Art and the Science
• Marketing Analytics
• Modern Econometrics for Business
• Natural Language Processing
• Operations Strategy
• People Analytics and Strategy
• Quantitative Finance: Models and Computation
• So, You Want to Be a Product Manager
• Strategic Consumer Insights
• Strategy and Competition in Pharma and Biotechnology
• Technology Strategy
• The Analytics Advantage
• The Business Of Climate Change: Investing and Managing In A Changing Environment
• The Leader’s Voice
• The New AI: The Business and Marketing of Aesthetics
• The U.S. Healthcare System: Structure and Strategies
• Think Bigger
• Virtual Reality and Artificial Intelligence
• Web App Programming in Python