



TSINGHUA-COLUMBIA
DUAL MASTER'S DEGREE PROGRAM
IN BUSINESS ANALYTICS





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WHY TSINGHUA

Tsinghua University was established in 1911. The campus of Tsinghua University is situated in the northwest Beijing on the site of the former imperial garden of the Qing Dynasty.

Among the top research universites in the world Tsinghua University ranks

16th

THE World University Rankings 2022 10th

THE World Reputation Rankings 2021

17th

QS World University Rankings 2022 6th

QS Graduate Employability Rankings 2022

15

QS Graduate Employability Rankings 2022 in Asia

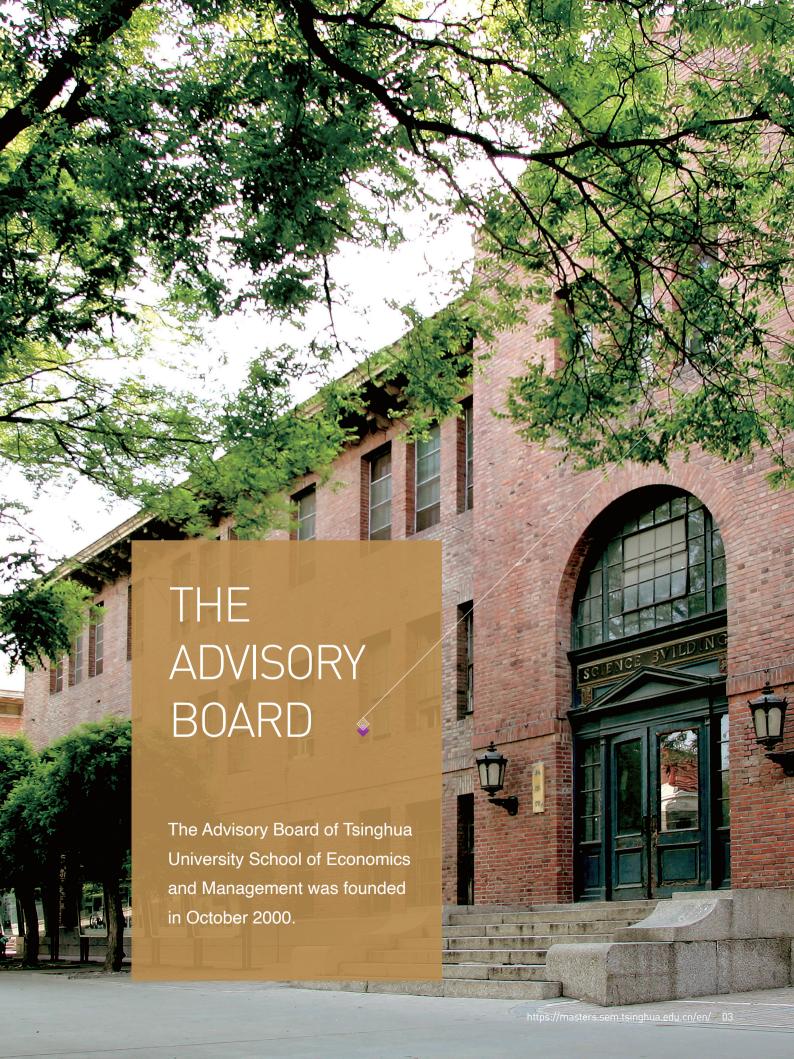
The World's Most Beautiful Campus

—Forbes Magazine

· Data as of September 30, 2022.

Tsinghua University School of Economics and Management (hereinafter referred to as "Tsinghua SEM") was established in 1984. Over the past 39 years, pursuing the mission of advancing knowledge and cultivating leaders for China and the world and the core values of integrity, dedication and respect, Tsinghua SEM has maintained a leading position in terms of personnel training, scientific research, social influence and international exchanges in China and has been striving to be a world-class economics and management school.

WHY TSINGHUA SEM





Honorary Chairman

ZHU Rongji

Founding Dean, School of Economics and Management, Tsinghua University (1984-2001)

Premier, State Council, People's Republic of China (1998-2003)

Honorary Members

The Lord Browne of Madingley

Chairman, BeyondNetZero Former Group Chief Executive, bp p.l.c.

HO Ching

Chairman, Temasek Trust

Henry M. Paulson, Jr.

Founder and Chairman, Paulson Institute Executive Chairman, TPG Rise Climate Former U.S. Secretary of the Treasury Former Chairman and CEO, The Goldman Sachs Group, Inc.

H. Lee Scott, Jr.

Former President and CEO, Wal-Mart Stores, Inc.

Chairman

Tim Cook

CEO, Apple

Vice Chairmen

WANG Xigin

Deputy Secretary, the CPC Tsinghua University Committee President, Tsinghua University

QIAN Yingyi

Professor and Dean (2006-2018), School of Economics and Management, Tsinghua University

Distinguished Professor of Arts, Humanities and Social Sciences, Tsinghua University Chairman, Board of Trustees, Westlake University

Members

Mary T. Barra

Chair and Chief Executive Officer, General Motors Company

Jim Breyer

Founder and CEO, Breyer Capital

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Chief Executive Officer, AXA

Roland Busch

Chairman of the Managing Board, President and Chief Executive Officer, Siemens AG

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Founder, CIO Mentor, and Member of the Bridgewater Board, Bridgewater Associates, LP

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George F. Baker Professor of Administration Dean, Harvard Business School

Michael Dell

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Chairman of the Board and Chief Executive Officer, JPMorgan Chase

Michel Doukeris

Global Chief Executive Officer, AB InBev

Laurence D. Fink

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William E. Ford

Chairman and Chief Executive Officer, General Atlantic

Jane Fraser

Chief Executive Officer, Citi

Victor K. Fung

Group Chairman, Fung Group

Christopher B. Galvin

Co-Founder and Chairman, Gore Creek Asset Management LLC Former Chairman and Co-Founder, Harrison Street Real Estate Capital Former Chairman and CEO, Motorola Inc.

Terry Gou

Founder, Foxconn Technology Group Senior Advisor, Sharp Corporation

Mario Greco

Group Chief Executive Officer, Zurich

Evan G. Greenberg

Chairman and Chief Executive Officer, Chubb Limited and Chubb Group

Maurice R. Greenberg

Chairman and Chief Executive Officer, Starr Insurance Companies

GU Binglin

Director, Institute for Advanced Study, Tsinghua University Former President, Tsinghua University

Erika James

Dean, The Wharton School of the University of Pennsylvania

Ola Källenius

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Christian Klein

CEO and Member of the Executive Board, SAP SE

Henry R. Kravis

Co-Founder and Co-Executive Chairman, KKR

Ramon Laquarta

Chairman and Chief Executive Officer, PepsiCo

Jonathan D. Levin

Philip H. Knight Professor and Dean, Stanford Graduate School of Business

Richard C. Levin

Former CEO, Coursera President Emeritus, Yale University

Richard Li

Founder and Chairman, Pacific Century Group



Robin Li

Co-Founder, Chairman and Chief Executive Officer, Baidu, Inc.

Bernard Looney

Chief Executive Officer, bp

Andrónico Luksic

Chairman, Luksic Group

Jack Ma

Founder, Jack Ma Foundation Partner, Alibaba Group

Pony Ma

Core Founder, Chairman of the Board and CEO. Tencent

Óscar García Maceiras

Chief Executive Officer, Inditex Group

Eric S. Maskin

Adams University Professor and Professor of Economics and Mathematics, Harvard University 2007 Nobel Laureate in Economics

Doug McMillon

President and CEO, Walmart Inc.

Elon Musk

CEO, Tesla, Inc. Co-founder and CEO, Space Exploration Technologies (Space X)

Satya Nadella

Chairman and Chief Executive Officer, Microsoft

James Quincey

Chairman and Chief Executive Officer, The Coca-Cola Company

Brian L. Roberts

Chairman and Chief Executive Officer, Comcast Corporation

David M. Rubenstein

Co-Founder and Co-Chairman, The Carlyle Group

Dilhan Pillay SANDRASEGARA

Executive Director and Chief Executive Officer, Temasek Holdings (Private) Limited and Temasek International Pte. Ltd

David C. Schmittlein

John C Head III Dean, MIT Sloan School of Management

Stephen A. Schwarzman

Chairman, CEO and Co-Founder, Blackstone

David M. Solomon

Chairman and Chief Executive Officer, The Goldman Sachs Group, Inc.

Masayoshi Son

Representative Director, Corporate Officer, Chairman and CEO, SoftBank Group Corp.

A. Michael Spence

Philip H. Knight Professor Emeritus of Management, Stanford University 2001 Nobel Laureate in Economics

Bob Sternfels

Global Managing Partner, McKinsey & Company

Ratan N. Tata

Chairman, Tata Trusts Chairman Emeritus of Tata Sons, Tata Industries, Tata Motors, Tata Steel and Tata Chemicals

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Executive Chairman, Barrick Gold Corporation Chairman, Pinebridge Investments Chair Emeritus, Brookings Institution

Ben van Beurden

Chief Executive Officer, Shell plc

Jacob Wallenberg

Chair of the Board, Investor AB

WANG Dazhong

Former President, Tsinghua University

Marjorie Yang

Chairman, Esquel Group

ZHAO Chunjun

Dean (2001-2005), School of Economics and Management, Tsinghua University

Oliver Zipse

Chairman of the Board of Management, BMW AG

Mark Zuckerberg

Founder and CEO, Meta

Updated on 28 November, 2022

WHY TCMiBA PROGRAM

Program Overview

Tsinghua-Columbia Dual Master's Degree Program in Business Analytics (TCMiBA) was co-established by the School of Economics and Management at Tsinghua University and the Fu Foundation School of Engineering and Applied Science at Columbia University in September 2014.

This program aims to develop interdisciplinary talent in the fields of management theory and cutting-edge information technology, with an emphasis on global vision and strong business analytical skills.

Students who have successfully completed the program will receive a Diploma and a Master's degree in management from Tsinghua University and a Master of Science degree from Columbia University.

TCMiBA is a full-time program that usually takes 2-3 years to complete. Students admitted to the dual degree program will study at Tsinghua University, Beijing, China, for the first year, and through an expedited application process, enroll and study at Columbia University, New York, USA, for the second year.

Study Journey

First Year

Tsinghua University Beijing, China **Second Year**

Columbia University New York, USA

Program Features

Collaboration between China and U.S. Top Universities

The School of Economics and Management at Tsinghua University is one of the world's top business schools, especially in the field of management, and the Fu Foundation School of Engineering and Applied Science at Columbia University is a world-wide leader in the field of engineering and data science. The TCMiBA program combines the strengths of both universities. In addition, Columbia University and Tsinghua University have a long history of cooperation in a wide range of academic and professional fields.

Interdisciplinary Approach to Management

Theory and Data Science

TCMiBA is a pioneer in developing an interdisciplinary education system that integrates data science and management theory. The program focuses on big data application in management, improving knowledge base in data analytics and modeling and enhancing management skills. This unique and forward-looking interdisciplinary approach will help nurture the future leaders of this century.

International **Education Geared** towards Industry **Practice**

Students enrolled in this program have diverse backgrounds. During their studies, students have access to many internships and job opportunities in Beijing, New York, and other major cities in the world, which helps them develop global vision and practical skills.

FACULTY

Up to September 30, 2022, Tsinghua SEM has 157 full-time faculty members and four dual-appointed faculty of Tsinghua Shenzhen International Graduate School (Innovation Management Area) and Tsinghua SEM (Shenzhen Campus). Among full-time and four dual-appointed faculty, 158 have Ph.D. degrees; nine are recipients of the China National Science Foundation's Distinguished Young Scholars Funds; ten are recipients of National Natural Science Foundation of China's Excellent Young Scientists Fund; four are Fellows of International Academic Institutes; nine are supported by the "Program for New Century Excellent Talents" of the Ministry of Education. Tsinghua SEM also invites Honorary Professors, Adjunct Professors, Visiting Professors, and Management Practice of Visiting Professors.



CHEN Guoging

- Department of Management Science
- Bachelor, 1992, Renmin University of China
- * MBA, 1988, Catholic University of Leuven
- Ph.D., 1992, Catholic University of Leuven



Intelligence and e-Business, Data Modeling and Fuzzy Logic



CHEN Yubo

- Department of Marketing Professor, Coca-Cola
- Senior Associate Dean, School of Economics and
- Ph.D., 2004, University of Florida

Research Areas



CHEN Jian

- Lenovo Chair Professor, Chair, Department
- Ph.D., 1989, Tsinghua University

Research Areas



XU Xin

- Department of Management Science and
- Associate Dean, School of Economics and
- Ph.D., 2005, University of California,

Research Areas

Business Value of IT, Social Media, IT



LIN Lihui

- Associate Professor, Department of Management Science and Engineering
- Ph.D., 2002, University of Texas at Austin

Research Areas

Knowledge Management, Crowdsourcing, Crowd Funding, Open Source, E-Commerce, IT Investment, Real Options Analysis, Licensing of Intellectual Property



LIU Dengpan

- Professor, Department of Management Science and Engineering
- Ph.D., 2006, University of Texas at Dallas

Research Areas

Information Systems and Information Management, E-Commerce, Internet Finance, Licensing of Intellectual Property



LIU Hongyan

- * Department of Management Science and Engineering Professor
- Ph.D., 2000, Tsinghua University

Research Areas

Data/Text Mining, Business Intelligence, Recommender Systems, Social Network Analysis, Healthcare Data Mining and Analysis



PAN Wenging

- Professor, Department of Economics
- Ph.D., 1999, Renmin University of China

Research Areas

Input-Output Analysis, Quantitative Economics Regional Economics. International Economics



WANG Chún

- * Department of Management Science and Engineering Associate Professor
- Academic Director
- Ph.D., 2014, Columbia University

Research Areas

Dynamic Programming, Decision Models, Financial Engineering and Risk Management



LI Bo

- Associate Professor, Department of Management Science and Engineering
- * Ph.D., 2006, University of California, Berkeley

Research Areas

Data Science Applied Econometrics

CURRICULUM

Timeline

YEAR 1 Home University

- Opening Ceremony and Orientation
- Required and Elective Courses
- Thesis Proposal (Tsinghua)

YEAR 2 Host University

Required and Elective Courses Thesis (Tsinghua)

Graduation

- Extended Learning and Student Activities
- Interns and Integrated Projects
- Career Development Services



Tsinghua University

Columbia University

Core Courses

Methods

Advanced Econometrics

- Optimization Models and
- Machine Learning with Applications in Python

Concentration Core

- Business Intelligence
- Management and Innovation in the Era of Big Data
- Data Analytics Strategy and Practice
- Integrated Business Analytics in Practice

Required Core

- Optimization Models and Methods
- Introduction to Probability and Statistics
- Stochastic Models
- Simulation

Required Technical Core

- Tools for Analytics
- Data Analytics for **Operations Research**

Integrated Business Analytics in Practice <-----

The course is designed to motivate students to think and learn creatively by involving them in real projects of modern enterprises. Students are expected to improve critical thinking capabilities and develop practical skills through tackling real business challenges.

Upon completion of the course, students will

- Improve proficiency in BA tools commonly used in modern enterprises
- Strengthen teamwork skills

• Enhance the ability to tackle real BA problems systematically



Degree

Tsinghua Phase

Master in Management (Management Science and Engineering)

Columbia Phase

MSOR

Master of Science in Operations Research, concentration in Business Analytics

MSBA

Master of Science in Business Analytics

MS&E

Master of Science in Management Science and Engineering

MSIE

Master of Science in Industrial Engineering

MSFE

Master of Science in Financial Engineering

*During the study journey of TCMiBA, bridging degrees at Columbia University have been extended into five directions since 2019.

CAREER DEVELOPMENT

CDC Service

The Tsinghua SEM Career Development Center (CDC) is dedicated not only to assisting Tsinghua SEM students to discover their career prospects, identify their career goals, refine their occupational qualities and skills, but also to bridging the gap between the students and the potential employers for more job offers and internship opportunities. The services provided are as follows:

Personalized Guidance

Job Opportunities

Activities and Lecture Series on Career Development

Organizing Career Trips

Initiating Career Development Courses

Voice of the Employers

The graduates from Tsinghua SEM we hired are very driven with solid structure thinking and crisp communication skills. They are passionate about Internet industry and are outstanding talents with high potentials.

CHENG Zhengyu

Tencent

Since years Siemens Management Consulting is recruiting from

Tsinghua University year by year we are impressed by the excellence and value foundation of the top talent from this top university in China. With their fast learning capability and structured approach to problem solving, they can directly contribute their own ideas to the projects and create impact for our customers.

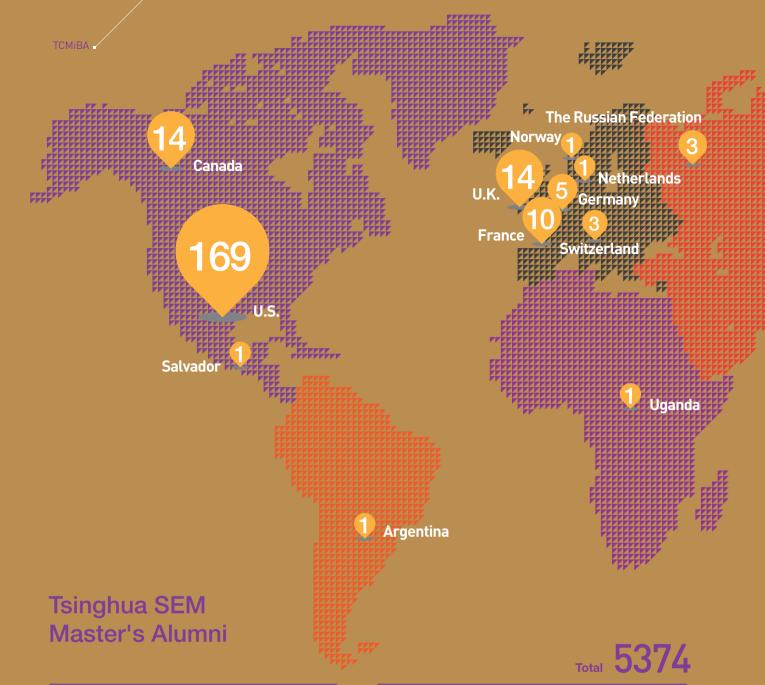
We welcome all Tsinghua graduates to join SMC to realize their career goal in consulting and set the foundation for a management career at Siemens.

Maximilian Duerre

Siemens Management Consulting

Top Employers





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Financial Services

Consultation and Information Services

Energy and Environmental Protection

Mechanical and Heavy Industries

Consumer Product Manufacturing

Computer, Internet, Telecom

Real Estate and Decoration

Transport and Logistics

Service Industry

Non-profit Organizations

Government Agencies

Wholesale, Retail, Trade

Industries

Medical, Pharmaceutical, Health, Biotechnology

Media, Advertising, Public Relations, Culture

Public Service

Education, Research, Training

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Agriculture, Forestry, Animal Husbandry

Construction Industry

Water, Environment and Public Facilities Management

Public Management and Social Organizations

International Organizations

Scientific Research, Technical Services and Geological Exploration

Other Industries



ALUMNI NETWORK

Tsinghua Alumni

Tsinghua University has fostered many outstanding scholars, successful entrepreneurs, and distinguished statesmen widely esteemed in China and abroad.

Outstanding alumni include the Nobel Prize winners Yang Zhenning and Li Zhengdao, statesmen such as President Xi Jinping, former President Hu Jintao, and former Premier Zhu Rongji, as well as elite entrepreneurs like Zhang Chaoyang (Charles Zhang).

87

Branch Association in China 56

Overseas
Branch

18

Countries have established Tsinghua Alumni branch associations

37,889+

Alumni from its Degree
Programs

3,965+

Alumni from Collaborative Degree Programs

98,132+

Alumni from Non-degree Programs

Tsinghua SEM Alumni

Tsinghua SEM is fortunate to have a strong alumni community. Alumni play vital roles in building positive awareness of the School and make significant contributions to help transform the School into a world-class higher education institution. The School has engaged in a number of initiatives to help alumni stay connected with each other and with the School, and it also runs an alumni e-newsletter and leverages various social media tools to keep alumni informed of school news and activities

OVERSEAS TSINGHUA ALUMNI MENTORS PLAN

Overseas Tsinghua Alumni Mentors' Profile

Average age

40+ years old

Living and working in the USA

10-20+ years



















Industries

Banking Financial Services Investment High-tech, etc.

15 Tsinghua alumni in the USA are appointed as TCMiBA overseas alumni mentors

Exclusively for TCMiBA students

The first overseas mentorship program in Tsinghua SEM

Guiding students' personal development, providing employment and internship opportunities and counselling life development during their TCMiBA study journey.



Student life at Tsinghua extends far beyond academic courses. Athletics, performing arts, colorful clubs and societies, and diverse social activities not only complement a student's studies at Tsinghua but also offer wonderful opportunities for friendship and learning.

Performing Arts

The Tsinghua Singing Competition, held annually in December, has become a tradition widely popular among the students. The New Year Gala Night, jointly prepared and performed by Chinese and international students, is a unique way for the international community at Tsinghua to celebrate the New Year.

Sports

The motto "Without sports, there is no Tsinghua" reflects the exceptional athletic tradition at Tsinghua. The Ma Yuehan Cup, the memorial event for the late Tsinghua Professor of Physical Education Ma Yuehan, is the highlight of the annual Tsinghua sports calendar. It is comprised of 40 sports, with more than 10,000 students and faculty participating.

Clubs and Societies

There are about 250 clubs and associations, covering six areas of sports, culture, arts, innovation, personal development, and social welfare.

Social Engagement and Service

At Tsinghua, students have the opportunity to participate in transforming local communities and addressing global social issues. In 2017, social engagement programs for Tsinghua students took them to 34 provinces, autonomous regions, municipalities and special administrative regions in China, as well as 24 countries and regions on five continents including the United States, Russia, and Kazakhstan.

HOW TO APPLY

International Applicants

Qualification of Applicants

- Applicants must be non-Chinese citizens with valid passports.
- Applicants should hold a degree that is equivalent to a Bachelor's Degree (or above) from China.

Application Schedule

Registration	Mid October to Late February
Interview	January to March
Admission	Late June

Registration

For more information:

https://yz.tsinghua.edu.cn/en/Admissions/How_to_Apply.htm



Application Documents

Application Form	* Resume
Personal Statement	Degree
Academic Transcripts	Three Recommendation Letters
• GRE	 Valid Passport

- Valid TOEFL or IELTS
- IELTS at least 7 and above

*For applicants whose undergraduate or graduate degree was awarded in a country in which English is not the official language.

Valid HSK at least level 5, score 180



Tuition Fees and Scholarships

Tuition Fees

Tsinghua Phase

Tuition for international students:
 RMB 30,000 per year

Columbia Phase

Please refer to the official website of IEOR, The Fu
Foundation School of Engineering and Applied Science
at Columbia University for the updated standard of
tuition fees. Students admitted in TCMiBA will pay tuition
and fees to Columbia University directly before starting
the Columbia phase.

Scholarships



Scholarships

Tuition Scholarships

Cover full or partial tuition fee support with a duration of one academic year. Applicants may apply for Tuition Scholarships annually (competitive).

Assistantship

Teaching Assistantship, Research Assistantship, and Management during stay at Tsinghua.

TCMiBA Excellence Scholarship

TCMiBA Excellence Scholarship is initiated from 2019 and established exclusively for TCMiBA students for rewarding those outstanding talents to reduce financial pressure, encourage to focus on study and research and also support the development of the program.



WHAT THEY SAY ABOUT TCMiBA PROGRAM

The great attractive advantage of the program is that it provides students with the opportunity to live in New York and Beijing, two global metropolitans in the world. At Tsinghua the courses prepared me for my study abroad; at Columbia I made best of the time to improve myself and seized every opportunity. While studying at Columbia, I had internships and worked with colleagues from around the world. Thanks to the TCMiBA program, I not only realized the dream of watching the game, but also participated in the NBA data analysis competition and landed the offer of basketball operations internship from Thunder. The program is such a bless to me in terms of the countless possibilities it has offered. As long as you seize the opportunity, you will realize your dream.

ZHOU Guantong

Alumnus, Graduated Class of 2019



Now I have just started a new journey at Columbia University after finishing my first year's study at Tsinghua University. I am very grateful to Tsinghua, where I was able to improve my professional knowledge and technical skills over the last year. It gives me confidence to continue my exploration in another country. The curriculum of Tsinghua SEM integrates theory with practice. In addition to basic courses such as mathematical statistics and optimization theory, the School also has big data-related courses that are especially designed for our program. The professors not only taught business analysis theories but also reached out to companies such as Renrendai and Didi Chuxing so that we could leverage the rich data owned by these companies to implement the strategies we conceived.

It is my pleasure to have joined Tsinghua-Columbia Dual Master's Degree Program in Business Analytics. I would like to thank Tsinghua for providing us with the best faculty and most innovative curriculum system. My gratitude goes to the mentors for their guidance and encouragement. I want to thank Tsinghua SEM for helping me apply for the Scholarship of CSC.

ZHANG Mingshan

Alumnus, Graduated Class of 2019

I am very pleased to join this program which brings me "more possibilities". The thoughtful design of the project curriculum integrates with the excellent overseas teaching mode and provide better resources for students. It focuses on how to apply insights to real-world scenarios derived from data. And we will obtain various hard skills through coding projects (Python, R). In this program, we are encouraged to ask questions, challenge existing methods and consider new ones. By studying business analytics, I can improve my strategic data management and fact-based decision-making skills.

The program will continue to push me out of my comfort zone, get in touch with the frontiers of management and information technology, and feel the collision of Eastern and Western culture. TCMiBA provides valuable resources, such as the world's top academic resources, alumni resources and career development resources. We can communicate and learn from the most creative minds, meet mentors, and constantly explore the boundaries of life.

LIU Yang

Student, Enrolled Class of 2020

School of Economics and Management Tsinghua University

Mission

To Advance Knowledge and Cultivate Leaders for China and the World.

Aspiration

To be a World-Class School of Economics and Management.

Core Values

Integrity Dedication Respect

Master's Programs Office

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Tsinghua University

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For more information, scan the code and visit our official WeChat.