CERTIFICATE PROGRAM FOR UNDERGRADUATES

SET YOUR COURSE

NORTHWESTERN UNIVERSITY

Kellogg
School of Management

ENHANCE YOUR
EDUCATION.

STAND OUT IN THE MARKETPLACE

TO FACE TODAY'S COMPLEX WORLD, A FOUNDATIONAL UNDERSTANDING OF MARKETS AND MANAGEMENT IS ESSENTIAL. BY ENROLLING IN THE KELLOGG CERTIFICATE PROGRAM FOR UNDERGRADUATES (CPU), YOU WILL HAVE THE BUSINESS TOOLS AND SKILLS TO REALIZE YOUR CAREER POTENTIAL AND MAKE AN IMPACT WHEREVER YOU GO.

You'll master graduate-level material in business analytics and finance in the program's rigorous curriculum. Taught by the Kellogg School of Management faculty, the program builds on the well-rounded academic foundation you receive at Northwestern in your major. Students develop advanced skills in qualitative and quantitative reasoning; gain exposure to real-world corporate scenarios; understand the nuances of solving challenging business problems; and receive training from some of the world's most highly regarded academics. Together, this education produces highly skilled graduates who stand out from their peers in the marketplace.

Students also learn how to work in groups and develop an appreciation for collaboration in academic and real-world settings. Our students are prepared for entry-level careers in areas such as asset management, product development, pricing, strategy formation, supply chain design, mergers and acquisitions, and more.

CHOOSE FROM TWO TRACKS

Certificate Program students earn a certificate in either ***Financial Economics*** (FE) or ***Managerial Analytics*** (MA). FE students learn valuation tools and financial applications, while the MA students develop analytic tools and skills used in business planning, operations and consulting. Each track consists of four courses.

Whether you study English or engineering, economics or art history, these specialized skills will help you launch a successful career in whatever field you choose. Students in both tracks hone their critical-thinking and communication skills and learn to navigate the complex terrain of the business world.

The four-course program is open to all Northwestern University juniors and seniors, regardless of major, who have completed advanced coursework in calculus, linear algebra, probability, econometrics/statistics and microeconomics.*

**Application required*

"EVERYONE IN THE PROGRAM IS SO SUPPORTIVE AND FOCUSED ON HELPING EACH OTHER TO BE SUCCESSFUL. THE WHOLE CPU PROCESS HAS BEEN SO REWARDING TO MY EXPERIENCE AT NORTHWESTERN."

DAVID MA '12

MAJOR:
MATHEMATICAL METHODS IN THE SOCIAL SCIENCES, ECONOMICS

CERTIFICATE:
FINANCIAL ECONOMICS

HOMETOWN:
POWELL, OH

EXPERIENCE THE KELLOGG DIFFERENCE

IMMERSE YOURSELF IN KELLOGG'S CULTURE, DEFINED BY ACADEMIC EXCELLENCE, EXPERIENTIAL LEARNING, AND A PASSION FOR COLLABORATION ACROSS THE CPU COURSES.

LEARN FROM WORLD-CLASS FACULTY. While remaining grounded in a liberal arts environment, students in the program benefit from the culture, research and academic excellence that are characteristic of the Kellogg School's premier MBA Program. Our program's faculty – all Kellogg professors – are preeminent thought leaders in their field and highly sought after by corporations, industries and government to provide insight and guidance on some of the world's toughest business and social issues. They are also passionate teachers and wise mentors committed to sharing knowledge and engaging in vibrant discourse with their students.

BUILD A STRONG NETWORK. Kellogg's unique and rigorous learning environment attracts students who are academically-focused and career-minded. Students in our programs have come from Northwestern's different undergraduate schools and among them, focus on a variety of majors and minors including: Applied Mathematics, Biological Sciences, Economics, Engineering, History, International Studies, Mathematics, Performance Studies, Political Science, Radio/Television/Film, and Sociology.

With these diverse backgrounds and interests, your peers are part of the rich classroom experience, providing different perspectives and insights to shape how you approach and solve problems. The program also provides students with many opportunities to meet outside the classroom through social and networking events, forming bonds that will last well beyond graduation.

TAKE HOLD OF YOUR CAREER

THROUGH A PARTNERSHIP BETWEEN THE KELLOGG SCHOOL AND NORTHWESTERN UNIVERSITY CAREER SERVICES, A CAREER ADVISER IS DEDICATED EXCLUSIVELY TO STUDENTS IN THE PROGRAM. OUR CAREER ADVISER HELPS STUDENTS TO LAUNCH SUCCESSFUL CAREERS UPON GRADUATION BY PROVIDING CUSTOM-TAILORED SUPPORT AND RESOURCES.

Students have secured positions at prestigious firms around the globe, such as Barclays Capital, The Boston Consulting Group, Facebook, Google, McKinsey & Company, Goldman Sachs and Teach for America.

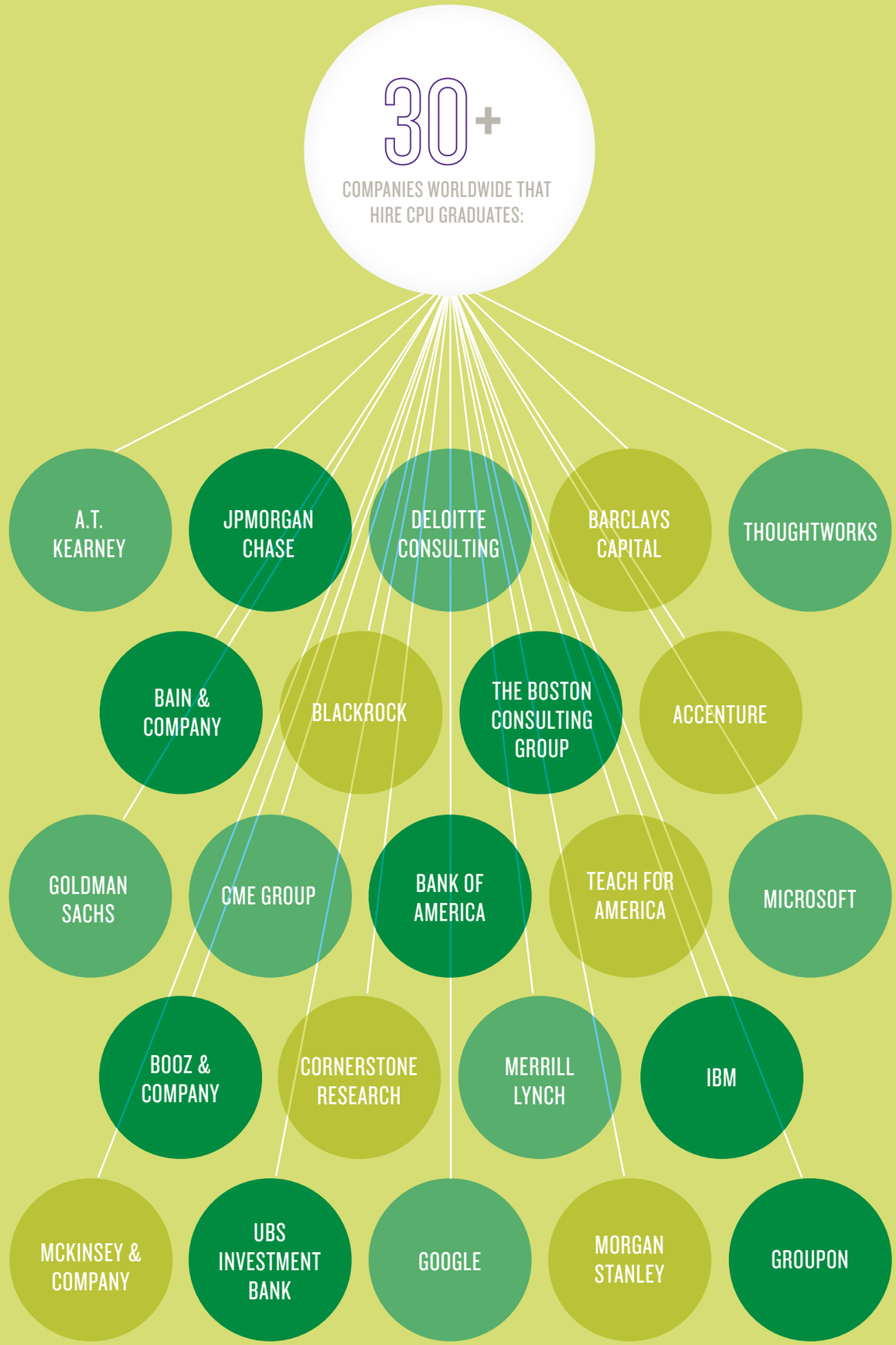
Our career benefits include:

SPECIALIZED EXPERTISE. Leverage both undergraduate job opportunities and the Kellogg School's employer partnerships across industries, such as financial services and consulting.

PERSONALIZED ATTENTION. Receive one-on-one assistance in crafting resumes and cover letters; practicing interviewing skills; choosing between job/internship offers; and answering questions that arise throughout the job and internship search process.

WORKSHOPS, PROGRAMS AND PRESENTATIONS. Attend on- and off- campus workshops: explore various industries; learn more about critical job-search skills; and participate in networking opportunities with potential employers.

ACCESS TO A GLOBAL NETWORK OF ALUMNI. Our growing CPU alumni network is currently about 300 strong. Our graduates work in companies worldwide and serve as a rich resource for students as they search for jobs, internships, career advice and more.



HANNAH TEITELBAUM '13

MAJOR:
INDUSTRIAL ENGINEERING

MINOR:
AFRICAN STUDIES

CERTIFICATE:
MANAGERIAL ANALYTICS

HOMETOWN:
ANN ARBOR, MI

READY TO TAKE ON ANY CHALLENGE

"I HAVE NO DOUBTS THAT THE CURRICULUM WILL HELP ME EXCEL ON WHATEVER TRAJECTORY I CHOOSE."

CPU has really challenged me think about problems in new ways. The group work also has been rewarding and great practice for the real world where team projects are the norm. ***The teams are always very motivated and give me an opportunity to learn from my peers.***

The program also has allowed me to network with lots of professionals in competitive fields, which will open a lot of doors in the future. I even got my summer internship through the program. Rachel, the career specialist, was incredibly helpful in steering me toward the opportunities that were most in line with my career goals and supportive of my preferences and values.

I would love to work in the field of humanitarian logistics, where I could fuse my managerial and engineering background with my passion for international affairs. I'm not sure yet if that means I'll be working for the United Nations, a non-governmental organization or a social enterprise, but I have no doubts that the curriculum will help me excel on whatever trajectory I choose.

"THE STUDENTS IN THE CPU PROGRAM ARE VERY INTELLIGENT, HIGHLY MOTIVATED, AND QUANTITATIVE. THERE ARE MANY OPPORTUNITIES TO NETWORK WITH THIS COMMUNITY. I KNOW THAT CPU ALUMNI WILL SOMEDAY BE LEADERS IN THEIR FIELDS, AND BEING PART OF THIS NETWORK WILL BE INVALUABLE."

RADU CRET '12

MAJOR:
ECONOMICS

MINOR:
BUSINESS INSTITUTIONS

CERTIFICATE:
FINANCIAL ECONOMICS

HOMETOWN:
ARAD, ROMANIA

CERTIFICATE IN FINANCIAL ECONOMICS

All Financial Economics certificate students take the following four courses:

PRINCIPLES OF FINANCE. This foundation course for the FE certificate is taken in the fall. The course discusses the principles of finance and focuses on the effects of time and uncertainty on value. Students learn valuation, including discounted cash flows; equity and debt valuation; the term structure of interest rates; portfolio theory; asset pricing; and efficient market theory. The course also examines firms' financing decisions, including capital budgeting, capital structure and payout policy.

INVESTMENTS. Students learn about active portfolio strategies in bonds and stocks, optimal portfolio selection from the perspective of individual and institutional investors, and the role of style and performance benchmarks in portfolio management. Special topics such as performance evaluation and trading costs are also covered.

DERIVATIVES. This course covers the fundamentals of forwards, futures, options and related derivative securities. Associated arbitrage pricing models and the use of derivatives in risk management are discussed in depth. Topics include cash-and-carry strategies in forward markets, the notions of cost-of-carry and convenience yield, the optimal exercise of American options, the binomial model, and the option pricing theory of Black, Merton and Scholes.

TOPICS IN FINANCIAL ECONOMICS. This course focuses on current issues in finance, so specific content can vary from year to year. The most recent focus is on international finance, including international financial instruments, markets, and institutions. Previous topics have included value investing and fixed income.

CERTIFICATE IN MANAGERIAL ANALYTICS

All Managerial Analytics certificate students take the following four courses:

PRICING. Students compare the three main ways to set prices: haggling/negotiation, posted price and auctions, and learn how to choose the best method in a given situation. They also explore customizing the price of the same product or service to different segments, using optimization models to set prices when volume is uncertain, and pricing multiple products. This course also offers an introduction to some of the main techniques (regression, conjoint analysis, EVC) for gathering information about buyer valuations and demands.

OPERATIONS AND SUPPLY CHAIN STRATEGY. This course provides a framework to examine key operational capabilities that a supply chain must develop to support the business strategy of a firm. It also looks at the relationship between the desired capabilities and the structure of a supply chain. Students learn about methodologies that support operations, supply chain strategy and planning decisions, using case studies and development of analytical spreadsheet models.

PRINCIPLES OF FINANCE. This course discusses the principles of finance and focuses on the effects of time and uncertainty on value. Students learn valuation, including discounted cash flows; equity and debt valuation; the term structure of interest rates; portfolio theory; asset pricing; and efficient market theory. The course also examines firms' financing decisions, including capital budgeting, capital structure and payout policy.

TOPICS IN MANAGERIAL ANALYTICS. This course focuses on current issues in managerial analytics, and specific content can vary from year to year. The current course focuses on empirical methods in customer analytics – scientifically analyzing extensive information about customers' choices to develop marketing strategies. The most recent course focused on developing and implementing a business strategy using empirical methods.

"THE FACULTY IS A CLASS APART. THAT WAS A DISTINCTION THAT I KNEW FROM DAY ONE. THEY TEACH US TO DEVELOP AN INTUITIVE FRAMEWORK TO TACKLE KEY BUSINESS ISSUES THROUGH A CASE-BASED APPROACH."

SHEKHAR BHENDE '13

MAJOR:
INDUSTRIAL ENGINEERING

CERTIFICATE:
MANAGERIAL ANALYTICS

HOMETOWN:
PUNE, INDIA &
SYDNEY, AUSTRALIA

STUDENTS EARNING THE FOLLOWING CERTIFICATES WILL BE PREPARED FOR RESPONSIBILITIES THAT INCLUDE:

FINANCIAL ECONOMICS

- CASH-FLOW ANALYSIS AND FINANCIAL MODELING
- OBTAINING, FINANCING AND COMPARING CAPITAL STRUCTURE CHOICES
- ANALYSIS OF POTENTIAL MERGERS AND ACQUISITIONS
- CAPITAL BUDGETING AND CAPITAL ALLOCATION DECISIONS
- PORTFOLIO INVESTMENT AND ASSET MANAGEMENT
- RISK MANAGEMENT STRATEGIES
- RESEARCHING CASH-FLOW AND VALUATION ESTIMATES
- FACILITATING AND PREPARING FOR CLIENT MEETINGS

MANAGERIAL ANALYTICS

- ANALYZING SALES AND OPERATIONAL DATA, SPOTTING TRENDS AND DEVELOPING FORECASTS
- ANALYSIS OF POTENTIAL MERGERS AND ACQUISITIONS
- INVESTMENT DECISIONS IN A SUPPLY CHAIN NETWORK
- ANALYZING AND OPTIMIZING SUPPLY CHAIN NETWORKS
- ANALYSIS TO SUPPORT PRICING DECISIONS
- STATISTICAL ANALYSIS OF CURRENT TRENDS IN BUSINESS PRACTICES, PRODUCTS AND INDUSTRY COMPETITION
- FACILITATING AND PREPARING FOR CLIENT MEETINGS

APPLY

Students who apply must demonstrate excellent quantitative and communication skills and have taken prerequisite courses in advanced calculus and linear algebra, probability, econometrics/statistics and microeconomics. Any Northwestern University student who meets these criteria may apply, regardless of school or major. The program is for Northwestern students only. We do not accept applications from high school seniors, students currently attending other universities, or anyone who is not currently a Northwestern University undergraduate.

The program accepts about 100 students each year — 50 in each certificate track. Students apply at the end of their sophomore or junior years for participation during the following school year. Applications are due during the winter quarter and admission decisions are made during the spring quarter.

The Financial Economics and Managerial Analytics certificates are not graduate degrees. Certificate Program students receive their undergraduate diplomas from their home schools — not the Kellogg School — but their transcripts will reflect a completed certificate from Kellogg.

MORE INFORMATION // For more detailed explanations about the application, application elements and deadlines, please visit our website at *kellogg.northwestern.edu/certificate.*

THINK BRAVELY.

START HERE.

KELLOGG SCHOOL OF MANAGEMENT
Northwestern University

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