The Top 10 Quant Schools, According to the Street

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Quantitative analysts are in high demand on Wall Street as electronic trading and the use of complex algorithms to access liquidity continue to proliferate. While in the past quants often have been Ph.D.s in the academic world before crossing over to the Street, today there are more and more programs geared specifically toward preparing quants for financial services jobs. These programs typically offer a Master in Financial Engineering (M.F.E.) degree, but many offer similar degrees, including a Master of Science in Financial Engineering (M.S.F.E.), a Master of Science in Financial Math (M.S.F.M.), a Master of Science of Mathematics in Finance (M.S.M.F.) and a Master in Mathematical Finance (M.M.F.).

While the degrees may not be uniform from university to university, the programs, or "quant schools," typically run one to two years long, are heavily focused on math and have a programming element. Students usually enter these programs either right out of college or after a year or two in the workplace.

These programs are not aimed at typical M.B.A. candidates, and generally require a heavy math focus in undergrad work. But with so many programs now available, which ones best prepare quants for the rigors of Wall Street, and which are most likely to land graduates a job at a top firm? For the first time ever, Advanced Trading has assembled a board of esteemed Wall Street veterans, each with an academic background that eventually led him down the quant road. The board was charged with selecting the top 10 quant schools, based on Wall Street recruitability -- the programs from which Wall Street firms recruit and the programs that produce the best quants (and why).

Our board comprised Robert Almgren, cofounder of Quantitative Brokers, adjunct faculty member at New York University Courant Institute's Mathematics in Finance program and former director of the Mathematical Finance program at the University of Toronto; Ian Domowitz, managing director of networking and analytical and research products at ITG; Steven Janowsky, head of financial engineering at FX Solutions; and Leo Murphy, manager of Trading Technologies' University Relations Program. (For more on our board members, see the Quant School Selection Board Member Bios, page 35.)

The 10 board-selected schools are Carnegie Mellon University, Columbia University, Cornell University, New York University, Princeton University, Rutgers University, Stanford University, University of California at Berkeley, University of Chicago and University of Michigan. While they vary in course requirements and curriculum, our board agrees that these are the top schools for candidates looking for quant jobs on the Street. Following, in no particular order, is a brief description of each program. The information was culled from our board as well as the programs' Web sites.

Carnegie Mellon University  Columbia University  Cornell University  New York University  Princeton University
Honorable mentions:
Baruch College; Boston University; Georgia Institute of Technology; University of Toronto

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Quant School Selection Board Member Bios

Robert Almgren

Robert Almgren is cofounder of Quantitative Brokers and currently an adjunct faculty member at New York University Courant Institute's Mathematics in Finance program. Almgren was formerly managing director and head of quantitative strategies in the electronic trading services group in the equities division of Bank of America Securities.

Before joining Bank of America, Almgren was an associate professor of mathematics and computer science at the University of Toronto, and director of the Mathematical Finance program. Previously, he was an assistant professor of mathematics at the University of Chicago and associate director of the Program on Financial Mathematics. He holds a Ph.D. in applied and computational mathematics from Princeton University. Almgren has written a number of papers on optimal trading strategies, equity trading cost measurement and portfolio formation from ordering information.

Ian Domowitz

Ian Domowitz is a managing director responsible for networking and analytical and research products at ITG. Prior to joining ITG in 2001, he served as the Mary Jean and Frank P. Smeal Professor of Finance at Pennsylvania State University. Domowitz also has held positions with Northwestern University, Kellogg Graduate School of Management, Columbia University, the Commodity Futures Trading Commission, the International Monetary Fund and the World Bank.

A former member of the NASD's Bond Market Transparency Committee, Domowitz also served as chair of the Economic Advisory Board of the NASD. He is currently a Fellow of the Program in the Law and Economics of Capital Markets at Columbia University. He received a Ph.D. in economics from the University of California at San Diego.

Steven Janowsky

Steven Janowsky is head of financial engineering at FX Solutions. He is responsible for risk management practices and systems, derivative products, and financial calculations. Janowsky has more than 20 years' experience in risk management, analytics and quantitative research. Prior to joining FX Solutions, he was head of analytical software at Clinton Group.

Janowsky has held various academic positions, including posts at the University of Texas, Rutgers University, Los Alamos National Laboratory and Harvard University, with more than 20 peer-reviewed publications. He received a Ph.D. in physics from Harvard University, as well as an A.M. in physics from Harvard University, an S.B. in physics from M.I.T. and an S.B. in mathematics from M.I.T.

Leo Murphy

Leo Murphy manages Trading Technologies' University Relations Program. The University Relations Program's goal is to equip schools with Trading Technologies' X_TRADER software through corporate software donations. Universities in turn
apply the software to their curriculum as they see fit.

Murphy began his career as a broker in fixed-income futures and options for Merrill Lynch at the Chicago Board of Trade. He was a senior economist in research and development for the CBOT before coming to Trading Technologies to manage the University Relations Program. He currently is an adjunct faculty member at Benedictine University (Lisle, Ill.) and Lewis University (Romeoville, Ill.), where he teaches economics.