# Who's Running Corporate America? A Study Of S&P 500 CEO's In 2005

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### **ABSTRACT**

Spencer Stuart Research & Insight is one of the world's leading executive search consulting firms. The firm was founded in 1956, is privately owned and operates 50 offices in 26 countries around the world. Clients range across industries and size from start-ups to the world largest firms. Spencer Stuart gathered and published raw data on the educational backgrounds of CEO's of S&P 500 companies in 2005. (See spencerstuart.com/research/articles/936) This paper draws on that data and compiles it in summary fashion to provide an overview of the persons serving in the role of CEO of S&P 500 corporations. Particular attention is given to the educational background of the CEO's.

### INTRODUCTION

eadership is important. So what goes into developing the leaders of the Fortune 500 companies? Spencer Stuart Research & Insight is one of the world's leading executive search consulting firms. The firm was founded in 1956, is privately owned and operates 50 offices in 26 countries around the world. Clients range across industries and size from start-ups to the world largest firms. Spencer Stuart gathered and published raw data on the educational backgrounds of CEO's of S&P 500 companies in 2005. (See spencerstuart.com/research/articles/936)

This paper draws on that data and compiles it in summary fashion to provide an overview of the persons serving in the role of CEO of S&P 500 corporations. Demographic criteria explored include age, whether the CEO is hired from inside or outside the firm, gender and length of service. Particular attention is given to exploring the education backgrounds of this cohort of CEO's at both the undergraduate and graduate levels.

# PROFILES OF THE CEOS OF THE S&P 500 COMPANIES IN 2005

### Age

The average age of the CEO's was 55. It appears that for most CEO's, they are just hitting their stride when they reach their 50's. Fifty-five percent of CEO's came from the age 50-59 cohort with another quarter of CEO's being 60 or older. It appears that it takes about five decades of life to develop the kind of human capital it requires to lead a complex business organization. The age distribution for this cohort of CEO's appears in Exhibit 1.

There is a wide range of ages represented among the S&P 500 CEO's. And even though the firms in this study are all part of the S&P 500, there are still wide variations in the relative sizes of these firms based upon asset book value and market capitalization, with the largest firms being over 2000 times as large as the smallest firms. Does the relative size of the firm have a bearing on the age of the CEO? Do larger size firms look for more life experience, i.e., older CEO's?

In an attempt to answer that question, three indexes were developed, 1) Age Index (Age of a given CEO divided by the mean age of all S&P 500 CEO's) 2) Asset Book Value Index (Total assets book value of a given firm divided by the average total assets book value of S&P 500 firms) and 3) Market Capitalization Index (Total market value of a given firm divided by the average market value of all S&P 500 firms).

- The values of the age index ran from a high of 1.49 to a low of .690.
- The values for the Asset Book Value index ran from a high of 28.366 to a low of .0139.
- The values for the Market Capitalization Index ran from a high of 16.3036 to a low of .0077.

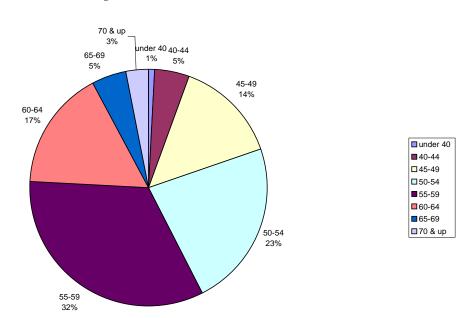


Exhibit 1: Age Distribution of S&P CEO's in 2005

The Age index was regressed separately against the book value index and market capitalization index in order to test:

- To what extent does the relative book value size explain the relative age?
- To What extent does the relative market capitalization explain the relative age?

The regression results are reported in Exhibit 2.

Exhibit 2: Regression Results - CEO Age and Firm Size

Dependent	Independent Variable	R	Estimated Coefficient of	Standard	T Statistic	P
Variable		Squared	Dependent Variable	Error		Value
Age Index	Asset Book Value Index	0.001759	.001767	0.00191	.887432	375323
Age Index	Market Capitalization Index	.004117	.004797	.003529	1.359304	.174736

The results show that there is virtually no explanatory value in using size of the firm as measured by either book value of the assets or market value of the outstanding stock of a firm to predict the age of a CEO.

### **Hired from Inside or Outside the Firm**

Most of the CEO's (71%) came from the company's existing ranks of employees. The other 29% were hired from the outside as the CEO. The average length of service as CEO for insiders was 6.3 years and 7.2 years for those hired directly from the outside. This suggests that there is not much difference in staying power as CEO between insiders or outsiders. Having an MBA doesn't seem to be much of a factor in deciding whether to go

inside or outside for your next CEO. Of those CEO's that came from outside the company, 38% had an MBA. That was similar to the 39% of CEO's coming from within the company that had an MBA. There is virtually no correlation between whether or not you are hired from the inside or outside and having an MBA. The correlation coefficient of 1) being hired from the outside the firm with 2) having an MBA was .00855.

### Gender

The pool of S&P 500 CEO's in 2005 included 7 women and 495 men. (The fact that this adds up to 502 is due to the fact that two firms had two different CEO's in 2005).

# Length of Service

The average length of a CEO's service with the firm they are leading is 17 years. But that average is skewed downward by the fact that the 29% of CEO's hired from outside the firm will have had a relatively short tenure with the company they are leading. The distribution of tenure of service is shown in Exhibit 3.

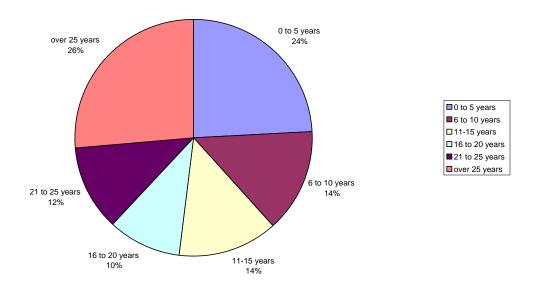


Exhibit 3: Distribution of CEO Length of Tenure with Firm for S&P 500 CEO's in 2005

The average for length of service in their current role as CEO with the firm is 7 years. But here again, the average is misleading in that 65% of CEO's have been in that role less than 7 years. CEO's with very long tenures will skew the average higher. The distribution of CEO's length of tenure as CEO is shown in Exhibit 4.

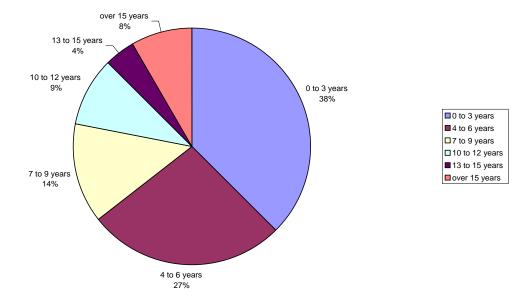


Exhibit 4: CEO's Length of Tenure as CEO for S&P 500 Firms in 2005

### **EDUCATION**

### **Undergraduate Education**

About one third (30%) of the S&P 500 CEO's in 2005 had undergraduate degrees in some aspect of business. If you count economics as a business related major, then that percentage increases by another 10 percentage points to 40%. Another third or so, (30%), of the CEO's majored in some aspect of engineering or physical sciences. A little over one fifth (22%) majored in arts, humanities or social science (excluding economics). Exhibit 5 summarizes the undergraduate background of the CEO's.

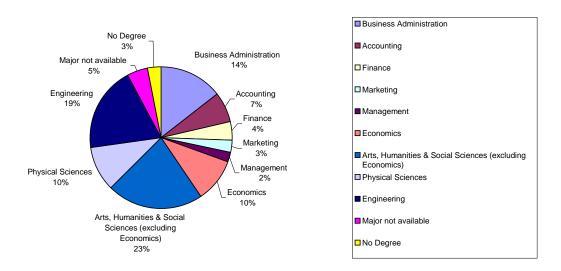


Exhibit 5: 2005 S&P 500 CEO's Undergraduate Major

Since the average age of these CEO's is 55, many of them would have been graduating from college around the early 1970's. It is interesting to note the distribution of undergraduate degrees for the pool of graduates from 1970-1971 and compare this against the distribution of undergraduate degrees of those that went on to become CEO's.

Fourteen percent of undergraduates, graduating in 1970-1971, majored in a business related field. Thirty percent of the CEO's in 2005 had an undergraduate degree in either business administration or a business related field. This is about twice as many as you might have expected, given the distribution of the college graduate pool in 1970-1971. Ten percent of the CEO's in 2005 had undergraduate degrees in Economics but only two percent of 1970-71 college graduates majored in Economics. Engineering students and Science students were also better represented among CEO's in 2005 than you might expect given the distribution of the undergraduate pool in 1970-71. Exhibit 6 shows the distribution of undergraduate degrees conferred in 1970-1971 and is followed by Exhibit 7, which matches the undergraduate backgrounds of 2005 S&P CEO's with the pool of corresponding graduates from the 1970-1971 period of time.

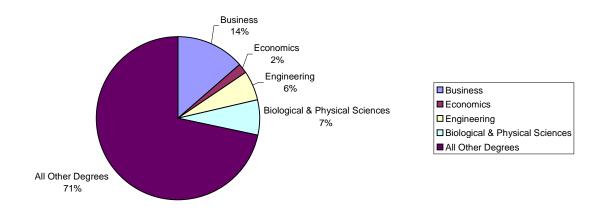


Exhibit 6: Summary of Undergraduate Degrees Conferred 1970-71

Exhibit 7: Summary of Undergraduate Degrees of S&P 500 CEO's in 2005 in Relation Pool of Undergraduate Degrees conferred in 1970-1971

Undergraduate degree	Undergraduate pool 1970-71	CEO's in 2005
Business	14%	30%
Economics	2%	10%
Engineering	6%	19%
Physical or Biological Science	7%	10%
Other	71%	31%

Of course, not all of the CEO's in 2005 graduated in 1970-71 and so it is difficult to draw hard and fast conclusions. But it can be argued that since the average age of CEO's in 2005 was 55, many of them would have graduated from college around that period of time. About half (53%) of the CEO's had gone on to do graduate studies of some sort. Only 38% of the CEO's had an MBA. It is interesting to note that 58% of the CEO's studied some aspect of a business curriculum (Business Administration, Accounting, Marketing, Management, Finance, MBA) either at the undergraduate or graduate level. Of course this means that 42% of the CEO's had no formal graduate or undergraduate education in business.

A total of 246 undergraduate schools were represented with alumni as S&P 500 CEO's in 2005. Harvard had the greatest number of alumni serving as CEO's (15) followed by University of Wisconsin (14), Stanford and Princeton (10 each), University of Texas (9) and Yale (8).

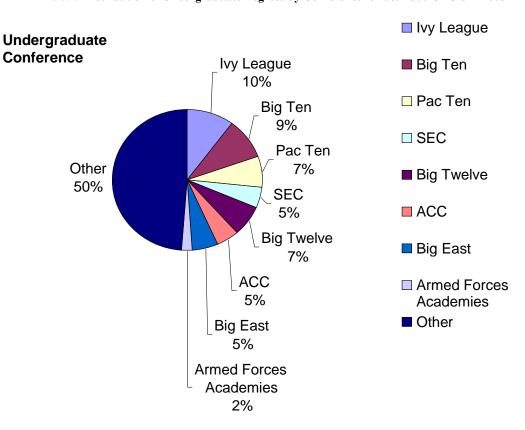
The top ten undergraduate producers of CEO's are presented in Exhibit 8. A table listing all the schools with alumni in the CEO role of S&P 500 companies in 2005 appears in Exhibit 14 in the appendix.

Exhibit 8: Top Ten Undergraduate Institutions With Alumni As S&P 500 CEO's in 2005 by Total Number of Alumni As CEO's

Rank	Number of alumni as S&P 500 CEO in 2005	Institution
1	15	Harvard University
2	14	University of Wisconsin
3	10	Stanford University
4	10	Princeton University
5	9	University of Texas
6	8	Yale University
7	7	University of North Carolina
8	7	University of Missouri
9	7	United States Naval Academy
10	6	University of Washington

Exhibit 9 Summarizes the representation of the major Academic Conferences with CEO's at the helm of the S&P 500 companies in 2005. The Ivy League schools had the most number of alumni CEO's (50) followed closely by the Big Ten (45).

Exhibit 9: Distribution of Undergraduate Degrees by Conference for S&P 500 CEO's in 2005



# **Advanced Degrees**

Graduate or professional education beyond the bachelor degree appears to be an important qualification for most CEO's. A graduate or professional degree is held by 53% of the CEO's. The profile of the graduate education experience is summarized in Exhibit 10.

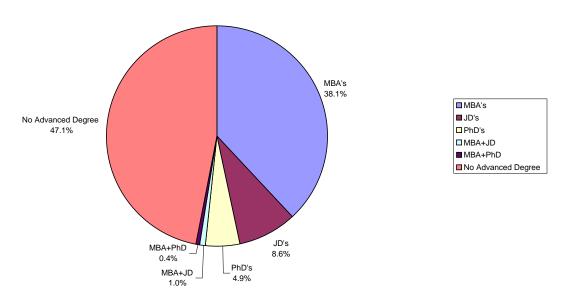


Exhibit 10: 2005 S&P 500 CEO's Graduate Degree Profile

### The Importance of an MBA and Industry

In analyzing the data, some questions came to mind:

- Is age a factor when it comes to having an MBA or not?
- If you already have an undergraduate degree in business, are you more likely or not to go on and get an MBA? Of course the complementary question to this would be, "If your undergraduate degree was in something other than business, are you more likely or not to get an MBA?".
- Do larger size firms favor having a CEO with an MBA?
- When firms go to the outside to hire a new CEO, how important is it that he/she has an MBA?

The correlation results for these questions appear in Exhibit 11.

Exhibit 11: Summary Correlation Results between Having an MBA and Age, Undergraduate Major, Firm Size, and Hired from Inside or Outside the Firm - S&P 500 CEO's in 2005

Question	Answer	Coefficient of Correlation
Is there a correlation between being below the median age of S&P CEO's and having an MBA?	NO	0.05323
Is there a correlation between having an undergraduate degree in business and having an MBA?	NO	-0.01657
Is there a correlation between having an undergraduate degree in something other than business and having an MBA?	NO	0.01657
Is there a correlation between size as measured by relative market capitalization and having an MBA?	NO	.00902
Is there a correlation between size as measured by relative asset book value and having an MBA?	NO	.058655
Is there a correlation between whether or not you are hired from the inside or outside and having an MBA?	NO	00855

# Gender and an MBA

Of the seven S&P 500 female CEO's in 2005, two (29%) had an MBA compared with 39% for males. With such a small sample size for females, it is difficult to generalize but at least in this case, gender does not appear to be much of a factor when it comes to having an MBA or not.

# **MBA** and Industry Classification

Having an MBA seems to be more important within some industries than others. Exhibits 12 and 13 list the various industries included in the S&P 500 along with how many of that industry's CEO's have an MBA. They are rank ordered by both 1) industry % share of the S&P 500 number of firms and 2) by percentage of industry CEO's with an MBA.

Exhibit 12: Percentage of Industry Firms' CEO's with an MBA for S&P 500 Firms in 2005 Ranked by Industry % Share of S&P 500 Number of Firms

INDUSTRY By SIC Code		Total Firms in this Industry Included	% of Total Number of	% of S&P 500 CEO's in the Industry
·	Total	in S&P	S&P	with an
Ranked by Industry % Share of S&P 500 Number of Firms	MBA's	500	Firms	MBA
Chemicals & Allied Products	18	40	8.0%	45%
Electronic & Other Electrical Equipment & Components, Except				
Computer Equipment	12	40	8.0%	30%
Electric, Gas, & Sanitary Services	13	38	7.6%	34%
Business Services	7	37	7.4%	19%
Depository Institutions	16	31	6.2%	52%
Industrial & Commercial Machinery & Computer Equipment	11	27	5.4%	41%
Photographic, Medical & Optical Goods; Watches & Clocks	12	25	5.0%	48%
Insurance Carriers	11	24	4.8%	46%
Food & Kindred Products	10	17	3.4%	59%
Oil & Gas Extraction	6	17	3.4%	35%
Transportation Equipment	6	17	3.4%	35%
Communications	5	16	3.2%	31%
General Merchandise Stores	3	12	2.4%	25%
Security & Commodity Brokers, Dealers, Exchanges, & Services	7	12	2.4%	58%
Holding Companies & Other Investment Offices	6	9	1.8%	67%
Printing, Publishing, & Allied Industries	2	9	1.8%	22%
Non-depository Credit Institutions	3	8	1.6%	38%
Paper & Allied Products	4	8	1.6%	50%
Health Services	3	7	1.4%	43%
Petroleum Refining & Related Industries	2	7	1.4%	29%
Rubber & Miscellaneous Plastics Products	5	7	1.4%	71%
Miscellaneous Retail	3	6	1.2%	50%
Eating & Drinking Places	0	5	1.0%	0%
Fabricated Metal Products, Except Machinery & Transportation				
Equipment	5	5	1.0%	100%
Wholesale Trade-Non-Durable Goods	3	5	1.0%	60%
Apparel & Accessory Stores	0	4	0.8%	0%
Engineering, Accounting, Research, Management, & Related Services	1	4	0.8%	25%
Home Furniture, Furnishings, & Equipment Stores	1	4	0.8%	25%
Hotels, Rooming Houses, Camps, & Other Lodging Places	1	4	0.8%	25%
Insurance Agents, Brokers, & Service	0	4	0.8%	0%
Primary Metal Industries	0	4	0.8%	0%
Railroad Transportation	1	4	0.8%	25%
Apparel & Other Finished Products Made From Fabrics & Similar	1	-	0.070	2370
Materials	2	3	0.6%	67%
1120001000	-	3	0.070	01/0

Exhibit 12 contin	ued			
Building Construction General Contractors & Operative Builders	0	3	0.6%	0%
Food Stores	0	3	0.6%	0%
Furniture & Fixtures	0	3	0.6%	0%
Metal Mining	1	3	0.6%	33%
Tobacco Products	1	3	0.6%	33%
Transportation by Air	0	3	0.6%	0%
Wholesale Trade-durable Goods	2	3	0.6%	67%
Amusement & Recreation Services	0	2	0.4%	0%
Automotive Dealers & Gasoline Service Stations	1	2	0.4%	50%
Building Materials, Hardware, Garden Supply, & Mobile Home				
Dealers	1	2	0.4%	50%
Lumber & Wood Products, Except Furniture	2	2	0.4%	100%
Miscellaneous Manufacturing Industries	2	2	0.4%	100%
Personal Services	1	2	0.4%	50%
Automotive Repair, Services, & Parking	1	1	0.2%	100%
Educational Services	1	1	0.2%	100%
Forestry	0	1	0.2%	0%
Heavy Construction Other Than Building Construction Contractors	1	1	0.2%	100%
Leather & Leather Products	1	1	0.2%	100%
Mining & Quarrying Of Nonmetallic Minerals, Except Fuels	1	1	0.2%	100%
Motor Freight Transportation & Warehousing	0	1	0.2%	0%
Stone, Clay, Glass & Concrete Products	1	1	0.2%	100%
Water Transportation	0	1	0.2%	0%
Totals	196	502	100%	

Exhibit 13: Percentage of Industry Firms' CEO's with an MBA for S&P 500 Firms in 2005 Ranked By % of Industry CEO's with an MBA

	Total		
	Firms in		% of S&P
	this		500 CEO's
	Industry	% of Total	in the
			Industry
Total	in S&P	S&P	with an
MBA's	500	Firms	MBA
5	5	1.0%	100%
		0.4%	100%
2	2	0.4%	100%
1	1	0.2%	100%
1	1	0.2%	100%
1	1	0.2%	100%
1	1	0.2%	100%
1	1	0.2%	100%
1	1	0.2%	100%
5	7	1.4%	71%
6	9	1.8%	67%
2	3	0.6%	67%
		0.6%	67%
3	5	1.0%	60%
10	17	3.4%	59%
7	12	2.4%	58%
16	31	6.2%	52%
4	8	1.6%	50%
3	6	1.2%	50%
1	2	0.4%	50%
1	2	0.4%	50%
	5 2 2 1 1 1 1 1 5 6 2 2 3 10 7 16 4 3 1	Firms in this Industry Included in S&P 500  5 5 5 2 2 2 2 2 2 2 1 1 1 1 1 1 1 1 1 1	Firms in this         Industry Included in S&P

Exhibit 13 continued	d			
Personal Services	1	2	0.4%	50%
Photographic, Medical & Optical Goods; Watches & Clocks	12	25	5.0%	48%
Insurance Carriers	11	24	4.8%	46%
Chemicals & Allied Products	18	40	8.0%	45%
Health Services	3	7	1.4%	43%
Industrial & Commercial Machinery & Computer Equipment	11	27	5.4%	41%
Non-depository Credit Institutions	3	8	1.6%	38%
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Primary Metal Industries	0	4	0.8%	0%
Building Construction General Contractors & Operative Builders	0	3	0.6%	0%
Food Stores	0	3	0.6%	0%
Furniture & Fixtures	0	3	0.6%	0%
Transportation by Air	0	3	0.6%	0%
Amusement & Recreation Services	0	2	0.4%	0%
Forestry	0	1	0.2%	0%
Motor Freight Transportation & Warehousing	0	1	0.2%	0%
Water Transportation	0	1	0.2%	0%
Totals	196	502	100%	39%

# **SUMMARY & CONCLUSIONS**

It seems to take about five decades of life experience to develop the kind of human capital it requires to lead a complex business organization. (80% of S&P CEO's are age 50 or above.)

Firms are more likely to promote from within the company rather than going outside the organization to hire a CEO. (71% of S&P CEO's were hired from within the firm.)

Graduate or professional education beyond the bachelor degree appears to be an important qualification for a majority (53%) of CEO's.

Undergraduate majors in Business, Economics, Engineering and Science represent a disproportionate share (69%) of CEO's educational backgrounds based upon the pool of all undergraduate majors.

### **AUTHOR INFORMATION**

**Dr. Bruce Howard** joined the faculty of Wheaton College in 1980 where he serves as professor of Business and Economics. He holds a PhD in economics and a masters of administration in accountancy. He is a member of the American Institute of Certified Public Accountants. Prior to his academic career, Dr. Howard worked in the banking and health care industries. He maintains an active consulting practice specializing in the publishing industry.

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**APPENDIX** 

# Undergraduate Institutions With Alumni As S&P 500 CEO's in 2005 by Total Number of Alumni As CEO's

		1			
15	Harvard University	2	Iona College	1	Southhampton College
14	University of Wisconsin	2	Indiana University	1	Southern Methodist University
10	Stanford University	2	Indian Institute of Technology	1	Southeast Missouri State University
10	Princeton University	2	Imperial College	1	Slippery Rock University
9	University of Texas	2	Hamilton College	1	Shimer College
8	Yale University	2	Georgetown University	1	San Diego State University
7	University of North Carolina	2	Fordham University	1	Sambalpur University
7	University of Missouri	2	DePaul University	1	Salve Regina University
7	United States Naval Academy	2	Davidson College	1	Rollins College
6	University of Washington	2	Columbia College	1	Rijks Hogere Technische School
5	University of Notre Dame	2	Cleveland State University	1	Providence College-Rhode Island
5	University of California at Los Angeles	2	California State Polytechnic University	1	Pomona College
5	Ohio State University	2	Brown University	1	Polytechnic University
5	Northwestern University	2	Brigham Young University	1	Point Park College
5	Duke University	2	Bowdoin College	1	Pittsburgh State University
5	Dartmouth College	2	Boston University	1	Phillips University
5	Cornell University	2	Baylor University	1	Oregon State University
5	California State University	2	Auburn University	1	New York University
4	University of Massachusetts	2	Arizona State	1	North Dakota State University
4	University of Georgia	1	Windsor College	1	Missouri Valley Community College
4	University of Colorado	1	Wichita State University	1	Middlebury College
4	Rutgers University	1	Wheaton College	1	Massachusetts Institute of Technology
4	Michigan State University	1	Westminster College	1	Marymount College
4	Louisiana State Univeristy	1	Western Carolina University	1	MacKenzie University
4	Denison University	1	West Virginia University	1	M.S. University (India)
4	City College of New York	1	Wellesley College	1	Loyola Marymount University
3	Williams College	1	Weber State University	1	Loyola College of Baltimore
3	Villanova University	1	Washington State University	1	Linfield College
3	University of Tennessee	1	Washington College	1	Lewis & Clark College
3	University of Pennsylvania	1	Washington and Lee University	1	Le Moyne College

3	University of Kentucky	1	Washburn University	1	Lawrence University
3	University of Iowa	1	Wake Forest University	1	Lausanne University
3	University of Illinois	1	Virginia Military Institute	1	Lake Forest College
3	University of Denver	1	Vanderbilt University	1	Knox College
3	University of Delaware	1	Valparaiso University	1	Kenyon College
3	University of Cincinnati	1	Valdosta State University	1	Kansas State University
3	University of Arizona	1	University of Wyoming	1	Johns Hopkins University
3	University of Alabama	1	University of Western Ontario	1	John Carroll University
3	United States Military Academy	1	University of Virginia	1	Isenberg School of Management
3	State University of New York	1	University of Toronto	1	Iowa State University
3	Purdue University	1	University of Southern Mississippi	1	Institut Superieur d'Electronique de Paris
3	Oklahoma State University	1	University of South Florida	1	Hunter College
3	Miami University of Ohio	1	University of Scranton	1	Hebrew University of Jerusalem
3	Loyola University	1	University of Santa Clara	1	Heald Engineering College
3	Lehigh University	1	University of Rochester	1	Harding University
3	Kettering University	1	University of Queensland	1	Grove City College
3	Georgia State University	1	University of Oklahoma	1	General Motors Institute
3	Georgia Institute of Technology	1	University of Nijmegen	1	Franklin University
3	DePauw University	1	University of New Hampshire	1	Franklin and Marshall College
3	College of the Holy Cross	1	University of Montana	1	Florida A&M University
3	City University of New York	1	University of Missouri-Rolla	1	Ferris State University
3	Boston College	1	University of Milwaukee	1	Eramus Universiteit Rotterdam
2	Worcester Polytechnic Institute	1	University of Miami	1	Emory University
2	Wharton School of the University of Penn.	1	University of Maine	1	Ecole des Hautes Etudes Commerciales, Paris,France
2	Western Illinois University	1	University of Huddersfield	1	Eastern Michigan University
2	University of Utah	1	University of Houston	1	East Texas State University
2	University of Southern California	1	University of Hawaii	1	Drake
2	University of Rhode Island	1	University of Glasgow	1	Creighton University
2	University of Pittsburgh	1	University of Florida	1	Colgate University
2	University of Oregon	1	University of Detroit	1	Clemson University
2	University of Nebraska	1	University of Cape Town	1	Christian Brothers College
2	University of Minnesota	1	University of California-Davis	1	Century University
2	University of Michigan	1	University of Bridgeport	1	Central Connecticut State University

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2	University of Maryland	1	University of Baltimore	1	Catholic University of America
2	University of Kansas	1	University of Amsterdam	1	Case Western Reserve University
2	University of California at Berkley	1	University of Akron	1	Carroll College
2	University of British Columbia	1	University College-Dublin	1	Canisius College
2	University of Arkansas	1	University of Wales	1	Brandeis University
2	Tufts University	1	University of Utah	1	Bradley University
2	San Jose State University	1	Union College	1	Boise State University
2	Rensselaer Polytechnic Institute	1	US Air Force Academy	1	Birmingham Southern College
2	Quinnipiac University	1	Tulane University	1	Berry College
2	Pennsylvania State University	1	Texas Technological University	1	Bates College
2	Ohio University	1	Texas State University-San Marcos	1	Bangalore University
2	Northeastern University	1	Technion-Israel Institute of Technology	1	Banaras University (India)
2	North Carolina State	1	Syracuse University	1	Ball State University
2	Mississippi State University	1	Stetson University	1	Augustana College
2	Manhattan College	1	St. Peter's College	1	Ashland University
2	Louisiana Tech University	1	St. Mary's University	1	Amherst College
2	Long Island University	1	St. Joseph's University	1	American Univ. Beirut
		1	St. John's University	1	Alfred University
		1	Spring Hill College	1	Adelphi University