

# ***2001-2002 Recruiting Trends***

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## EXECUTIVE SUMMARY

This year marked a significant shift in the college labor market. For the past three years graduating students have experienced a wealth of opportunities throughout all sectors of the economy: from glamorous and chic dot.coms to the traditional manufacturing companies, jobs have been plentiful. Also thrown into the mix is the changing demographic profile of the workforce, for which the early millennial forecasters predicted a continuation of the hot job market. Unfortunately, the economy hit a big bump (actually several), which sent the labor market in a tailspin. This study reveals just how much wind has been taken out of the market's sail. While the market has taken a hit, it remains resilient – only 6% of respondents will not hire this year. The remaining 85% will hire but at rates much lower than the previous two years.

- Much of the damage to the market actually occurred last year when employers curtailed hiring during the latter half of the academic year. Respondents reported hiring 34% fewer bachelors graduates and 45% of masters graduates than they projected last year.
- This year the market will contract another 15% to 20% depending on degree level and academic major. Bachelor graduates can expect a decline of 6% to 13% while masters and doctoral graduates will experience a 20% decline.
- Nearly 40% of the respondents indicated that their hiring intentions were still very uncertain at the time of the survey. This group's ability to hire would give a boost to the market because last year they hired, on average, more graduates than respondents who indicated hiring quotas for this year. Hiring depends on:
  - Consumer confidence, particularly for retail, construction, and food and lodging (tourism) sectors.
  - Sustained national economic growth, particularly for manufacturing and professional services.
- Events of September 11 impacted the labor market by dampening further consumer confidence and softening the economy, pushing hiring further into the future. Respondents expressed hope that hiring would pick-up during the second quarter of 2002; now the third quarter appears more likely.
- Even with the layoffs and slow hiring, skill replacement continues to be a driving force in labor acquisition.
- The biggest losers in the market are engineers, computer science, and business graduates. These groups will still have opportunities, but they should not expect the multiple offers of previous years.
- Salaries may grow at 1% to 3%, but some salary suppression was noticed at the top end of some salary ranges. Employers are also reigning in other monetary expenditures – few will use bonuses or other special incentives to lure candidates.
- For those companies who expressed an interest in liberal arts and science majors, hiring levels will be higher this year than last.
- Communication skills have become the key factor on which hiring decisions are being made.
- “Organizational fit” will be a critical factor in the hiring process, as more employers want to insure that new hires can socialize into their workplace quickly and effectively.
- e-recruiting remained at the same level as benchmarked last year: 35% of recruiting activity takes place on the Web, with 10% to 20% (depending on company) of firms hiring directly as a result of these initiatives.

## INTRODUCTION

What a difference a year makes! Thirteen months ago the economy was experiencing the first month of a yearlong slowdown. With the Federal Reserve raising interest rates and the employment rate remaining uncharacteristically low, the sputtering economy appeared to be having only a moderate impact on the demand for labor. By the end of the January 2001, however, the economy took a nosedive in response to the collapse of dot.com companies and general unease in the IT sector. Consumer spending moderated these downward tendencies by supporting traditional economic companies during the spring. By the end of summer, consumer spending could no longer buoy the economy. Then, the events of September 11 stalled the economy, suppressing any lingering confidence.

What impact has the past year had on the college labor market? Has the steam been taken out of the most robust market since WWII? Even as the economy slowed, pressure remained on employers to increase new hires to replace retiring workers or upgrade job skills. Did these pressures materialize or did the market collapse? If hiring expectations are down, what can college seniors expect this year from employers?

This report attempts to shed light on the dynamics of the college labor market as it has developed during the fall of 2001. The explosive market, which began in the spring of 1997, has run its course, at least for this year. Employers have expressed a high level of uncertainty surrounding their hiring goals. While remaining visible to this year's graduates, employers may not actually have their hiring targets in place until the spring of 2002.

## EMPLOYER PROFILE

This study captured the 2001-2002 hiring intentions of 286 employers who responded to a mail survey. The survey was completed by a designated individual in the human resources or college relations department of the organization. The response approached an adjusted return rate of 8%. Complete details on the research strategy and variable definitions can be found in Appendix A.

### BASIC PROFILE

These employers were primarily in the manufacturing and professional services sectors of the economy, according to the North American Industrial Classification (NAIC) system that they provided or were listed in *Standard and Poor's Register of Corporations, Directors and Executives*. Fifty-nine percent (59%) were women representing units that ranged in size from approximately 10 employees to 380,000 employees. While 53% recruited in the north central region of the country, 27% recruited across the United States, 18% in the northeast, and 19% in the southeast. These employers were less likely to recruit in the western states, with the exception of California. About 8% recruited internationally.

A variety of recruiting strategies were utilized to find suitable candidates. Approximately 86% used on-campus recruiting, 74% attend job fairs, 67% received resumes referred to them by colleges, 69% utilized their co-op and internship programs, 75% provided web environments for direct applications, and 47% employed Internet/web job listing services. The other strategies

commonly employed were advertisements in newspapers and professional journals (48%) and employee referrals.

When it came to their most effective or primary strategies, 24% placed on-campus recruiting, 17% job fairs, 16% co-op/internship programs, and 16% organizational web applications at the top. Other strategies, which made a modest showing, were newspaper ads (8%) and resume referrals (8%).

Each respondent identified the top five academic majors they were seeking this year. Approximately 35% were seeking at least one engineering major, 26% sought business majors, 3% sought social science or humanities majors, and 12% and 4% were looking for computer science and science majors, respectively.

A complete profile of organizations responding to this survey can be found in Appendix B.

### **Review of 2000-2001: What happened?**

By tracking the hiring performance of this year’s participants, who had responded to the 2000-2001 survey, a picture of what happened last year comes into focus. The year started with high expectations: heavy attendance at fall career fairs, early requests for on-campus interview slots, and increased demand for resumes. By February, however, college career offices were experiencing increasing days of silence as employers reduced their interviewing activities.

Based on a comparison of the “number expected to be hired” (reported in 2000-2001) and the “number actually hired” in 2000-2001 (reported this year), the college labor market appeared to implode last year as hiring for bachelor’s graduates was reduced 34% from expectations and master’s graduates a whopping 45%.

**Table 1. Comparison (percent change) between Expected Hires and Actual Hires for 2000-2001 (n)**

<b>Degree Level</b>	<b>Expected to hire 2000-2001</b>	<b>Actually hired 2000-2001</b>	<b>% Change</b>
Associates	13.1 (19)	4.8 (12)	-63
Bachelors	52.4 (112)	34.4 (107)	-34
Masters	12.9 (44)	7.1 (35)	-45
PhD	6.0 (13)	5.6 (9)	-7

This evidence strongly suggests that this year’s labor market will be significantly impacted by the situation that developed during the latter half of the previous academic year.

### **EMPLOYMENT OUTLOOK**

For nearly a year the economy has been under siege: devaluation of the stock market, increasing unemployment, and a softening of consumer confidence. How companies perceived the factors influencing the economy will influence their short term hiring levels. This year a scaled set of items (1 = not likely to 5 = extremely likely) replaced the open-ended response of the previous year. Several factors emerged or failed to emerge when compared to previous years.

- Retirements. Succession planning, a strong stimulus for new hires last year, has temporarily been removed from the table, as employees saw the value of their retirement accounts decline by 30-40%. Retirement for many has been postponed. The one exception is the Federal Government.
- Consumer Confidence. As consumer confidence headed down, so has consumer demand – much of the economy is operating at significantly less than capacity. Since consumer confidence held the economy together in the spring, respondents hope that consumers will pull the economy up over the next several months. Reports on consumer spending were encouraging for October; the continuation of the trend through December would certainly help.
- Economic Growth. This catchall category signals all sectors of the national economy are operating toward full production. While there is an argument as to whether the U.S. is in a recession, the economy has failed to respond to the stimuli provided by interest rate cuts and tax rebates. Given the lag time required to jolt the economy, these actions, plus others being considered, will hopefully spur the economy.
- Skill Replacement. Behind some of the reported lay-offs, companies are hiring new workers with different skill sets than those being let go. This factor continues to play a major role, as it has for much of the 1990's, in framing the college labor market.

**Table 2. Factors Influencing the Company's Hiring Goals**

<b>Factor</b>	<b>% Extremely Very Likely</b>	<b>% Likely</b>	<b>% Not Somewhat Likely</b>
National economic growth	30	36	34
Consumer confidence	14	31	54
Skill replacement	14	31	55
Gov't. spending	19	14	67
Lay offs/reductions	19	7	74
Stock market perf.	12	15	73
Global competition	10	15	75
Restructuring	14	12	74
Retirements	11	12	77
Changing consumer perf.	7	11	82
Venture capital	7	13	80
Tax reductions	3	12	85
Loan repayments	4	6	90

- Layoffs. The good news, for the sample at least, is that 75% do not expect any further layoffs.

An examination of these items across several respondent characteristics found these differences among employers (significance <.05 for all reported comparisons).

- Company size. Large companies were more likely to be affected by layoffs (F=3.024), restructuring (F=4.098), and stock market performance (F=5.935) than medium or small size companies.

- Hiring intentions (see below). Those companies whose hiring intentions are uncertain or only preliminary at this time could be influenced more by future layoffs (F=4.016) and restructuring (F=2.759) than those companies who will not hire or have definite hiring goals. Uncertain and preliminary status companies also are more likely to consider skill replacement (F=3.124) in their hiring decisions.
- Recruiting areas. Companies recruiting internationally were not as concerned about retirements (F=9.956), but more concerned about restructuring's (F=8.361) impact in their hiring. Companies whose respondents indicated that they recruited throughout the U.S. expressed the most concern about the economy's influence on hiring. For all these factors, national recruiters rated these influences significantly higher:

Lay offs (F=8.547)  
 Restructuring (F=6.225)  
 Skill replacements (F=5.017)  
 Consumer preferences (F=7.677)  
 Global competition (F=9.524)  
 Stock market (F=11.704)

Regional recruiting markets were much more likely to be able to buffer the national economic conditions. The exception was found in the North central region where concerns about changing consumer preferences (automobiles), global competition (automobiles, steel, for example) and restructuring remain high.

- Economic sector. Examination of the ratings found that: Government agencies and health organizations expressed the most concern about retirement. Retail trade was likely to be impacted directly by consumer confidence, as were the information and food/lodging sectors. Layoffs still concerned manufacturing, information, and professional services sectors. Improvement in the country's economic growth was highly important to all sectors.

**MwACE TEMPERATURE POLL**

**What's the temperature at the career services office near you?**

**Cooled off considerably from last year –  
 need to protect oneself from the chill**

**16% warm – above normal**  
**42% normal function temperature**  
**40% chilly**

**PERCEPTIONS ON THE COLLEGE LABOR MARKET**

Respondents were asked to provide their impression of the prospects for new college graduates based on their knowledge of national and regional labor markets, particularly with regards to their industry or service sector. They were asked to rate the markets from which their organization recruited as “excellent” (1) to “poor” (5).

### OVERALL JOB MARKET (Table 3)

In rating the overall labor market, respondents moved noticeably away from last year’s ratings of “very good” to “excellent” toward being “fair” to “good”.

- 80% responded to a good to fair labor market as opposed to 11% for “very good” to “excellent”
- The average rating was 3.55 – a shift of more than 2 points on the scale from last year – a significant move.

### INDUSTRY JOB MARKET (Table 4)

Asked to rate their industry’s labor market, respondents were slightly more optimistic.

- 25% believed their industry’s labor market was “very good” to “excellent”; 32% rated it “good” while 31% indicated it was fair - an additional 12% indicated it was poor.
- The mean of 3.27 places the industrial job market index at “good”.
- Retail, at the time they responded to the survey, felt their sector was doing much better than the economy as a whole; as did the finance/insurance and food/lodging sectors.
- Manufacturing and professional services were more likely to be experiencing a poor to fair labor market.

### REGIONAL LABOR MARKETS (Tables 3 and 4)

Asked to rate only regions in which they recruited or hired college graduates, respondents gave the northeast region the strongest labor market. The other regions clustered closely ranging from 21% to 26% as “excellent” to “very good”. The regions with the weakest labor markets appeared to be the northwest and the north central.

- Regional job markets were considered slightly stronger than the national and industrial responses. This response pattern is a switch from that experienced in the past two years. Regional market conditions in those surveys were considered not as favorable as national markets.
- 28% reported the northeast region to be a “very good” to “excellent” labor market.

**Table 3. Perceptions of the College Labor Market (%)\***

	<b>n</b>	<b>Excellent</b>	<b>Very Good</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>Mean</b>
Overall job market	280	2	9	31	49	10	3.55
Job market – industry	280	5	20	32	31	12	3.27
Job market – industry in:							
Northeast	123	6	22	32	28	11	3.16
Southeast	117	6	20	38	27	9	3.15
North central	203	5	16	33	37	8	3.27
South central	91	7	19	38	24	12	3.16
Northwest	79	4	18	32	34	13	3.34
Southwest	87	6	17	34	33	9	3.23

\*Totals may exceed 100% due to rounding.

**Table 4. Perceptions from Different Economic Sectors for the College Labor Market  
(% good to excellent)**

	<b>Construc.</b>	<b>Manuf.</b>	<b>Transp.</b>	<b>Retail</b>	<b>Financial</b>	<b>Prof. Services</b>	<b>Public Admin.</b>
Overall job market	60	35	50	50	55	45	100
Job market – industry	60	44	0	87	75	55	67
Job market – industry in:							
Northeast	--	42	--	60	90	58	--
Southeast	50	50	--	80	86	64	--
North central	60	49	--	80	59	49	--
South central	50	52	--	60	100	62	--
Northwest	50	52	--	67	60	45	--
Southwest	50	50	--	67	60	60	--

	<b>Ag. &amp; Nat. Res.</b>	<b>Public Utilities</b>	<b>Information</b>	<b>Health Care/ Social Servs</b>	<b>Accommodation Food Services</b>	<b>Business Support</b>	<b>Wholesale</b>
Overall job market	50	0	27	0	58	14	33
Job market – industry	50	100	36	100	83	57	50
Job market – industry in:							
Northeast	--	--	40	--	100	100	--
Southeast	--	--	25	--	86	100	--
North central	--	--	50	--	67	60	33
South central	--	--	33	--	100	100	--
Northwest	--	--	20	--	67	50	--
Southwest	--	--	50	--	67	67	--

\*Some sectors did not have sufficient observations for regional breakdowns

**MwACE Temperature Poll**

**Level of Activity in office compared to last year:**

**3% much more**  
**5% somewhat more**  
**33% about the same**  
**41% somewhat less**  
**18% much less activity**

### HIRING INTENTIONS

Realizing that employers may not have formulated their hiring goals because of economic condition or they have only set preliminary goals that could change during the year, a question was inserted in this year’s survey that addressed their hiring strategy at the time the survey was completed. About 6% indicated they would not hire this year and 13% have set firm hiring goals for the year. The remainder split evenly between uncertain and preliminary on their hiring intentions.



- 6% will not hire any college graduates this year
- 40% organization's intentions are uncertain at this time
- 41% hiring targets are preliminary at this time
- 13% firm hiring targets set for this year

Hiring intentions are based on a comparison of the number hired last year to the expected number of college hires to be made during the 2001-2002 academic year. In 2000-2001, 240 employers who provided data to this survey hired 11,302 college students at all degree levels. During 2001-2002, those who provided data (172) expect to hire approximately 6075 college students. Approximately 110 respondents did not reveal their hiring intentions for this year.

Comparison 1. The first step was to compare the difference between hiring targets for 2000-2001 and 2001-2002. For all graduates, 44% employers were reducing the number of graduates hired; 24% were hiring at the same level; and 32% were hiring more students (Table 5).

**Table 5. Percentage of Employers Decreasing, Increasing, and Hiring at the Same Level Compared to Last Year (%)**

	All Graduates	Associates	Bachelors	Masters	PhD/Prof.
Decreasing Hiring	44	9	39	28	26
Hiring same level	24	65	26	32	52
Increasing Hiring	32	26	35	40	22

When examined by degree level, more than 90% of employers hiring associate and 61% of employers hiring bachelor graduates will be hiring at or above last year's level. For master's graduates, hiring looks very promising compared to the situation reported in Table 1 with 74% hiring at the same level or higher. At the Ph.D. level, about a quarter were decreasing hires.

Comparison 2. Employers who were uncertain about their hiring goals provided information on their hiring in 2000-01 but were not able to state this year's quota. In aggregating across all respondents, the uncertain pool tends to weigh the averages for 2000-01, as they tended to hire more than those who provided all the information. To account for this fact statistically, four tables on hiring intentions have been prepared.

- All responses included in Table 5a.
- Only those expecting to hire in 2001-02 in Table 5b.
- Respondents who responded to the 2000-01 survey (a continuation of Table 1) in Table 6.
- New participants for this year in Table 7.

From these tables, the following can be inferred.

- Overall total college hires will be reduced 20% over last year.
- Bachelor's hiring will be down 6% to 13%.
- Master's hiring will be down 15% to 20%.
- Last year's participants who experienced heavy cuts last year in the master's market expect to rebound this year.
- Because of the low number of observations, the trends may not be as definite, yet it appears that the associate's market will be okay. This can be attributed to the underlying strength of the regional economic areas.
- The PhD market has softened by 10% to 15% over last year.

**Table 5a. Hiring Changes Between 2001 and 2002 All Responses**

<b>All Responses</b>	<b>n</b>	<b>2000-01 Average Hired</b>	<b>n</b>	<b>Average Expected Hires 2001-02</b>	<b>Percent Change</b>
All graduates	240	47.1	172	35.3	-25
Associates	46	4.9	30	7.4	+51
Bachelors	238	37.9	155	33.9	-11
Masters	100	9.5	63	7.5	-21
PhD/Prof.	43	6.6	25	5.2	-21

**Table 5b. Hiring Changes Between 2001 and 2002 for Only Those Expecting to Hire in 2002 Academic Year**

<b>All Responses</b>	<b>n</b>	<b>2000-01 Average Hired</b>	<b>n</b>	<b>Average Expected Hires 2001-02</b>	<b>Percent Change</b>
All graduates	148	49.0	156	38.9	-21
Associates	17	9.1	20	11.1	+22
Bachelors	141	40.7	148	35.5	-13
Masters	42	10.6	53	8.9	-16
PhD/Prof.	14	10.3	15	8.6	-16

**Table 6. Hiring Changes for Those Who Responded in 2000-2001**

<b>All Responses</b>	<b>n</b>	<b>2000-01 Average Hired</b>	<b>n</b>	<b>Average Expected Hires 2001-02</b>	<b>Percent Change</b>
All graduates	109	43.9	79	29.6	-32
Associates	12	4.8	8	7.4	+54
Bachelors	107	34.4	69	28.5	-17
Masters	35	7.1	20	8.9	+25
PhD/Prof.	9	5.6	4	5.0	-11

**Table 7. Hiring Changes for Those Who Did Not Participate Last Year**

<b>All Responses</b>	<b>n</b>	<b>2000-01 Average Hired</b>	<b>n</b>	<b>Average Expected Hires 2001-02</b>	<b>Percent Change</b>
All graduates	131	49.7	93	40.1	-19
Associates	34	4.9	22	7.4	+51
Bachelors	131	40.8	86	38.2	-6
Masters	65	10.8	43	6.8	-37
PhD/Prof.	34	6.9	21	5.2	-25

**SIZE OF HIRING UNIT:**

Examination of hiring by company size revealed:

- Small companies reported that they will continue to hire bachelor’s and associate graduates.
- The largest companies are reporting the largest drop in hiring.
- Master’s hiring, with the exception of firms 700-3,000, is down across all sectors.

**Table 8. Change in Hiring Expectations Between 2000-01 and 2001-02  
Based on Size of Organizational Unit Respondent Recruiting For (%)**

	<138	140-600	700-3,000	>3,200
All Graduates	+15	-7	-11	-31
Associates	+15	+12	-35	+40
Bachelors	+38	+20	+32	-31
Masters	-11	-34	+13	-9
PhD/Professional	+43	NC	+14	-44

**INDUSTRIAL SECTOR**

- Financial services, construction, public administration, and food and lodging show positive hiring patterns for the year.
- Retail, wholesale and information services will contract modestly this year.
- Manufacturing and professional services will experience the largest decline in hiring – by nearly 50%.

**Table 9. Change in Hiring Expectations Between 2000-01 and 2001-02  
Based on Economic Sector (% change)**

	All Graduates	Associates	Bachelors	Masters	PhD/ Professional
Ag & Nat Resources	-23	--	-18	--	--
Construction	+20	--	+12	--	--
Manufacturing	-51	-21	-47	-54	-24
Wholesale	-17	--	-14	--	--
Retail	-12	*	-26	*	+25
Transportation	-25	--	-28	--	--
Information	-15	NC	-19	+61	+78
Finance	+7	+25	+11	+38	--
Prof. Services	-46	>100	-19	+10	-88
Lodging & Food Serv.	+13	>100	+11	--	--
Public Admin.	+30	NC	+37	>100	+43

**ACADEMIC MAJOR**

- Business, engineering, and computer science graduates will experience the biggest decline in opportunities. The year positions will be available but graduates should not expect multiple offers.
- Liberal arts and science numbers will increase as the companies seeking them plan to expand hiring.

**Table 10. Change in Hiring Expectations Between 2000-01 and 2001-02  
Based on Academic Majors (%)**

	<b>Bus.</b>	<b>Eng.</b>	<b>Comp. Sci.</b>	<b>Liberal Arts</b>	<b>Comm.</b>	<b>Ag./ Const.</b>	<b>Sciences</b>	<b>Allied Health</b>
All Graduates	-23	-35	-34	+22	-20	+31	+51	-5
Associates	+49	>100	>100	+79	+56	NC	+87	-17
Bachelors	-18	-10	-17	+23	-21	+32	+38	-9
Masters	-27	-37	-9	-10	-30	+92	+64	->100
PhD/Profess.	NC	-22	-21	--	--	--	-6	+46

**A FINAL LOOK AT HIRING – WHEN WILL IT OCCUR!**

Evidence in this study suggests that college hiring had contracted well before the events of September 11. Because of the timing of this survey, the impact of the terrorist attack and insuring military reprisals could not be isolated. However, several consequences have become evident:

- The economy essentially stopped for several days in mid-September, which caused a ripple effect that lasted for several weeks. The stall dampened any momentum toward improving the economy the 3<sup>rd</sup> quarter.
- Companies, particularly in tourism, food and lodging, and retail, who could have ridden out a slow third quarter, were immediately knocked on their heels.
- Consumer confidence eroded even further, increasing the uncertainties surrounding the economic climate. This factor alone has had the biggest impact on framing hiring intentions.

To determine when in the business cycle companies expected to hire this academic year, a question solicited their input as to the quarters (could select two) that they expected to hire. The pattern of response suggests that hiring will be strongest beginning in the second quarter of 2002 and continue through the summer. Those who responded after September 11 tended to push their hiring activities further into the future.

<b>Business Quarter</b>	<b>% expecting to hire</b>
Third quarter 2001	5%
Fourth quarter 2001	24%
First quarter 2002	38%
Second quarter 2002	65%
Third quarter 2002	36%
Fourth quarter 200	18%

Those companies with firm hiring goals expect to begin hiring during the fourth quarter 2001 through spring; those with preliminary targets expect to hire during the first and second quarters of 2002; and those who are uncertain clearly do not intend to hire until second quarter (73%) and into third quarter 2002.

Retail and professional services expected to begin hiring during the fourth quarter, this may or may not materialize; finance and insurance companies indicated that they would begin hiring

during the first of the year; manufacturing, along with the other economic sectors, reported the majority of their hiring would begin in the second quarter; and, finally, the information services sector expect hiring to begin in the second quarter but carry strongly through the third quarter.

Companies hiring in the Northeast expect to start strongly at the beginning of the new year while hiring in the North central region can be expected to be delayed into the summer months.

**Economic Recovery and Hiring:** A word of caution in terms of anticipating when hiring might begin. Once the economy begins to recover and the indicators signal upward movement, hiring will not begin immediately. First, companies will need to begin utilizing more of their capacity with their current workforce before new hires are brought into the company. Further complicating the picture is the backlog of labor waiting to find a position. Many members of the class of 2001 are still (will be) seeking a position, combined with a large pool of educated workers who have been laid off over the past several months. The class of 2002 will enter this mix and will find the market congested. It is going to take time to clear.

**Retirements:** While retirements for many workers has been delayed, demographics still favor recent college graduates and this year's class. This year's recession is simply a bump (unfortunate for those who hit the bump) in the road for a labor market that will encounter strain as it attempts to supply new employees for those leaving.

**Words of advice:** Company representatives were asked to provide advice to seniors as they prepared for their job search in this tight market. The responses tended to cluster around five key activities that job seekers could engage:

- **Research.** Take time to research the companies with whom the student would like to work. Researching smaller companies may be more difficult. Companies are placing a premium on "organizational fit" – particularly when they can be more select in the hiring process. By identifying companies that offer the entry-level experiences and environment a student desires can help focus the search.
- **Experiences.** Continue to gain life experiences through internships, volunteering, and related activities. Even if a student cannot immediately connect to a job at graduation, these activities provide valuable connections toward a position when the market opens up. In other words, do not drop out.
- **Personal reflection.** Graduates need to take time on what they really want to do; find their interests and passions. Set goals around these passions.
- **Attitude.** The labor market may change quickly; yet will remain very competitive. Graduating seniors need to have an open-mind on the opportunities in the labor market; be flexible when it comes to considering offers; and above all patient.
- **Strategy.** First set realistic expectations (particularly with regards to salary) and be prepared for the job search (start early, prepare for interviews, and know how one stands out from others).

**MwACE Temperature Poll**  
**Employee attendance at job fairs held this fall**

**10% few more than last year**  
**26% same as last year**  
**41% several fewer than last year**  
**22% many fewer than last year**

### **SALARY EXPECTATIONS**

Respondents were asked to provide the starting salary ranges offered in 2000-01 and expected in 2001-02 for the five key majors that they recruit. They were further asked to provide salary ranges by degree level (associates, bachelors, masters, and Ph.D.). Tables have been prepared for associate, bachelor, and advanced degrees. Specific majors are included where the number of reported salaries was sufficient to provide stable statistics. Where the observations (n's) are small, caution must be taken in interpreting the salary range. The percentage increase column reflects the midpoint between the shift in the low end of the range and the high end of the range.

General findings, based on the employer's salary information:

- Respondents indicated that salary figures were estimates (if provided at all) as the slow economy could further erode salary levels. A glimpse of what transpired last year can be found in Appendix C-2. This table shows that several key sectors, especially information and professional services, ended the year offering salaries well below expectations.
- Bonuses and other signing incentives will not be used this year.
- Salary adjustments overall will reflect only a small increase over last year, approximately 1% to 3%.
- Overall: Associates' salaries can be expected to increase by 3.2%.  
Bachelors' salaries can be expected to increase by 2.1%.  
Masters' salaries can be expected to decrease by -.4%, or stay the same.  
PhD salaries are expected to increase by 1.3%.
- By type of degree earned at the bachelors' level:  
Business will increase by 2% to 5%.  
Engineering will increase by 1% to 4%.  
Computer Science will increase by 1.2% overall.  
Social Science/Humanities will increase by 4.5% overall.  
Sciences will increase by 3.7% overall.
- By type of degree earned at the master's level:  
Business will range from -2.5% to 2.9%.  
Engineering will range from -1% to 4.8%.  
Computer Science will see little change from last year.  
Social Science/Humanities will not increase this year.  
Sciences will increase by 1.3%.

- From Table 15, starting salaries by industry sector show:
  - Highest salaries in professional services and manufacturing
  - Highest salary increases at the bachelor's level will be in the construction (9%), food and lodging (6%), and professional services (5.7%) sectors.

**Table 11. Associates Degree  
2001-02 Expected Starting Salary Range Compared to 2000-01 Salary Range (\$)**

<b>Seeking</b>	<b>n</b>	<b>Starting Salary Range 2000-01 (\$)</b>	<b>n</b>	<b>Starting Salary Range 2001-02 (\$)</b>	<b>% Change</b>
Any Major	9	24,500-26,700	9	24,600-26,900	+7.7
Liberal arts – any major	3	28,800-31,000	3	30,300-32,000	+3.2
Business (all reported)					
Business – any major	2	27,600-30,000	2	29,000-31,000	+3.3
Accounting	4	26,200-31,500	4	26,500-31,700	+6.6
Business Administration	7	26,500-31,900	6	27,700-32,300	+1.2
Hotel/Restaurant	6	24,800-25,800	5	27,000-27,800	+7.7
Finance	4	22,100-28,900	4	23,700-30,500	+5.5
Marketing	3	29,600-35,000	3	30,500-35,800	+2.3
Merchandising	2	28,200-35,500	2	28,700-36,000	+1.4
Engineering (all reported)					
Civil	4	30,000-34,700	3	29,700-35,700	+2.9
Mechanical	4	32,700-36,700	4	33,500-42,700	+2.4-10.0
Computer Sciences (all reported)	9	27,200-33,600	9	28,000-36,000	+7.1
Computer Science	3	25,800-30,700	3	27,500-32,200	+4.9
Computer Programming	2	27,500-30,000	2	27,500-32,000	+6.7
MIS	4	28,100-37,500	4	28,600-40,900	+5.5
All reported salaries	91	27,000-31,100	81	26,900-32,100	+3.2

**Table 12. Bachelor's Degree  
2001-02 Expected Starting Salary Range Compared to 2000-01 Salary Range (\$)**

<b>Seeking</b>	<b>n</b>	<b>Starting Salary Range 2000-01 (\$)</b>	<b>n</b>	<b>Expected Starting Salary Range 2001-02 (\$)</b>	<b>% Change</b>
Any major	19	32,700-37,000	19	32,900-37,200	+0.5
Humanities/Soc Sci (all reported)	41	32,700-35,900	41	33,100-36,500	+1.7
Liberal arts – any major	20	31,300-34,600	20	31,800-35,400	+2.3
Psychology	7	35,100-37,700	7	35,400-38,400	+1.8
Criminal Justice	3	39,700-41,700	3	39,800-41,800	+0.2
English	2	25,000-29,000	2	26,000-30,000	+3.4
Sciences	26	36,500-40,400	27	37,700-41,900	+3.7
Chemistry	4	32,000-36,000	4	32,100-36,100	+0.3
Zoology	4	35,000-38,000	4	36,600-39,600	+4.2
Info. Science	15	40,700-46,200	14	41,400-46,500	+0.6
Mathematics	9	42,000-47,600	10	43,300-49,800	+4.6
English	2	25,000-29,000	2	26,000-30,000	+3.4
Business (all reported)					
Business – any major	32	33,600-37,200	32	24,200-38,200	+2.7
Agricultural Business	3	29,700-31,300	3	30,700-32,300	+3.2
Accounting	47	35,600-38,100	46	36,400-39,700	+4.2
Business Administration	45	34,300-37,400	44	34,900-38,300	+2.4
Economics	14	35,700-38,900	14	36,500-39,700	+0.2
Finance	32	35,600-38,900	29	36,600-40,100	+3.1
Hotel/Restaurant	12	27,000-31,100	12	29,000-31,700	+1.9
Human Resources	11	33,200-36,500	10	34,300-36,800	+0.8
Logistics/Supply Chain Mgt.	30	36,200-39,800	29	38,300-41,900	+5.3
Management IS	25	43,000-47,500	26	43,300-47,900	+0.8
Marketing	28	32,200-35,900	28	33,000-37,200	+4.2
Merchandising	7	30,800-34,500	6	31,100-36,000	+4.3
Engineering (all reported)					
Technical – any major	4	37,000-39,200	4	37,500-40,300	+2.8
Architectural	3	35,300-39,300	3	36,700-40,000	+1.8
Civil	27	37,200-39,100	28	38,000-40,300	+3.1
Chemical	27	45,900-47,800	27	46,000-48,300	+0.1
Computer Engineering	28	48,100-52,100	30	48,600-53,000	+1.7
Computer Programming	12	40,700-45,900	14	41,200-47,200	+2.8
Computer Science	47	44,600-48,400	47	45,000-49,000	+1.2
Electrical	53	45,700-49,200	51	46,700-49,800	+1.2
Environmental	8	37,800-41,800	7	38,700-42,900	+2.6
Engineering Tech.	7	37,100-41,900	7	39,600-43,000	+2.6
Industrial	23	41,000-45,500	20	41,600-47,000	+3.3
Mechanical	66	44,100-47,100	64	44,900-48,100	+2.1
Materials	11	43,000-51,100	11	44,800-49,700	-1.2
Engineering Arts (general)	3	42,000-43,700	4	42,500-45,700	+4.6
Packaging	3	42,300-46,300	3	42,700-46,700	+0.9
Computer Sciences (all reported)	95	45,000-49,500	47	45,300-50,100	+1.2
Computer Science	43	48,700-52,900	44	48,000-52,400	-0.9



Management Info. Systems/IS	40	42,400-47,000	39	43,600-48,600	+3.4
Programming	12	40,700-45,900	14	41,200-47,200	+2.8
Communication	17	29,600-33,900	17	30,300-34,300	+1.2
Advertising	6	27,400-31,700	6	27,700-31,900	+0.6
Journalism	4	26,700-30,700	4	27,200-32,200	+4.9
Public Relations	5	25,600-29,600	5	26,000-30,000	+1.3
Construction Mgt.	7	38,200-40,400	7	38,800-41,400	+2.5
Allied Health (all reported)	6	28,500-32,100	6	29,700-33,300	+3.7
All Reported salaries	780	38,300-41,900	771	39,100-42,800	+2.1

**Table 13. Master's Degrees  
2001-02 Expected Starting Salary Range Compared to 2000-01 Salary Range (\$)**

<b>Seeking</b>	<b>n</b>	<b>Starting Salary Range 2000-01 (\$)</b>	<b>n</b>	<b>Starting Salary Range 2001-02 (\$)</b>	<b>% Change</b>
Any Major	7	36,600-44,800	7	33,300-41,900	-6.4
Liberal Arts (any major)	5	43,000-50,200	5	43,000-49,600	-1.2
Technical (any major)	1	38,000-42,000	1	39,000-41,000	-2.4
Humanities/Social Science (all)	8	34,000-43,500	8	34,400-43,500	NC
Sciences (all)	13	47,000-53,500	13	47,300-54,200	+1.3
Business (all reported)					
Business – any major	3	62,300-67,000	3	61,300-65,300	-2.5
Accounting	13	42,900-50,000	13	43,900-50,800	+1.6
Business Administration	8	51,800-59,500	7	51,500-60,300	+1.3
Economics	5	48,800-51,200	5	49,400-52,200	+1.9
Finance	10	51,500-57,500	11	51,400-57,400	NC
Human Resources	4	44,400-47,100	3	47,300-51,300	+8.9
Logistics/Purchasing	4	58,700-68,200	4	59,000-68,000	-.3
Marketing	4	49,800-54,500	4	51,200-56,100	+2.9
Engineering (all reported)					
Civil	10	42,500-44,000	11	42,700-46,100	+4.8
Chemical	14	52,200-54,600	14	52,600-55,200	+1.1
Computer Engineering	14	57,500-61,400	16	57,600-61,800	+.6
Electrical	23	55,100-59,800	23	56,100-59,100	-1.2
Environmental	5	41,300-45,300	5	42,800-49,000	+7.3
Industrial	7	44,300-53,100	6	43,500-52,700	-.7
Materials	7	51,300-64,400	7	50,600-58,800	-2.5
Mechanical	23	50,100-53,400	23	52,500-57,000	+4.8
Computer Sciences (all reported)	51	48,100-53,900	52	47,850-54,100	+.4
Computer Science	23	53,200-57,500	23	52,800-57,500	NC
Info Science	5	41,300-54,500	5	41,800-55,000	+.9
MIS	11	48,800-54,700	10	48,800-55,400	+1.3
Computer Programming	12	40,700-45,900	14	41,200-47,200	+2.8
All reported salaries (master)	261	48,100-54,000	264	48,700-53,800	-.4

**Table 14. PhD Degrees  
2001-02 Expected Starting Salary Range Compared to 2000-01 Salary Range (\$)**

<b>Seeking</b>	<b>n</b>	<b>Starting Salary Range 2000-01 (\$)</b>	<b>n</b>	<b>Starting Salary Range 2001-02 (\$)</b>	<b>% Increase</b>
Any Major	2	53,000-57,500	2	53,000-57,500	NC
Humanities/Social Science (all)	3	50,000-71,600	3	50,300-71,700	NC
Sciences (all)	13	53,000-60,500	13	54,500-61,800	+2.1
Psychology	2	51,000-66,000	2	51,500-66,200	+3
Business (all reported)					
Business – any major					
Accounting	2	45,000-64,400	2	45,000-64,400	NC
Engineering (all reported)					
Civil	4	45,100-47,100	4	44,900-48,700	+3.4
Chemical	6	63,900-67,200	6	64,500-67,800	+9
Computer Engineering	4	60,700-65,000	5	59,600-70,000	+7.7
Environmental	2	43,500-45,500	2	44,500-48,000	+5.5
Materials	3	74,500-76,200	3	66,500-67,900	-10
Mechanical	10	58,400-64,200	10	59,200-65,500	+2
Computer Sciences (all reported)	10	56,300-64,400	10	56,000-64,200	-.3
Computer Science	5	53,600-61,000	5	53,300-60,700	-.3
Info Science	3	52,700-73,000	3	53,000-73,300	+4
Pharmacy	6	66,300-73,400	6	70,300-76,800	+4.6
All reported PhD salaries	88	54,600-61,400	87	55,300-62,200	+1.3

**Table 15. Expected Starting Salary Range for Industrial Classification**

Seeking	n	Starting Salary Range 1999-00 (\$)	n	Expected Starting Salary Range 2000-01 (\$)	% Increase
Construction					
BA	11	40,300-41,500	11	41,300-42,700	2.9
Manufacturing					
AA	22	29,500-37,400	20	29,400-39,000	4.2
BA	264	41,700-45,100	258	42,300-45,800	1.5
MA	96	53,000-59,400	93	55,100-61,000	2.7
PhD	25	65,800-70,200	23	66,700-72,000	2.6
Wholesale Trade					
AA	8	25,100-27,100	8	22,700-27,700	2.2
BA	22	35,200-37,700	22	35,600-38,200	1.3
Retail Trade					
BA	51	33,600-37,100	47	34,400-38,600	4.0
MA	7	39,700-46,200	7	39,800-46,000	nc
PhD	3	67,300-74,700	3	69,700-77,700	4.4
Transportation					
BA	7	31,200-35,900	7	31,200-37,700	5.0
Information					
AA	7	19,500-22,700	10	23,500-32,000	10.0
BA	47	35,900-38,500	51	36,400-39,300	2.1
MA	14	46,200-49,900	21	46,800-50,600	1.0
PhD	12	48,700-56,500	17	50,200-56,300	nc
Finance/Insurance					
BA	63	35,800-38,600	63	36,400-39,400	2.1
MA	13	46,900-48,200	13	47,700-49,200	2.1
Professional Services					
AA	19	30,200-33,900	9	29,200-33,200	-2.1
BA	201	39,300-43,800	197	40,500-44,900	2.5
MA	88	47,100-54,200	85	47,400-52,400	3.3
PhD	30	52,400-54,800	27	53,200-63,800	3.1
Health					
BA	11	29,700-36,500	11	30,300-36,900	1.1
Food and Lodging					
AA	13	26,300-27,500	12	27,800-28,500	3.6
BA	24	28,900-31,800	24	30,200-32,600	2.5
MA	4	30,000	5	31,400	4.6
Public Administration					
BA	17	34,800-38,300	17	34,700-38,400	nc
MA	7	47,500	7	47,300	nc
PhD	5	58,200	5	58,200	nc

\*Bottom of range moving up faster than the top of the range

## RECRUITING ISSUES

### Adjustments in Hiring Last Year

Because of the rapid change in economic climate during the first and second quarters of 2001, many firms had to adjust their hiring figures. In this sample nearly half (49%) said they revised the number of hires 7% and increased their numbers by 3% to 98% while 42% reduced their hiring goals by 1% to 98% (10%, 20% and 50% reductions were common). Table 1 illustrates the impact of these decisions on actual hiring levels.

In some cases full-time offers had to be withdrawn or starting dates delayed indefinitely. Among the sample several had to take such drastic steps:

- Approximately 10% had to withdraw offers affecting 1 to 90 positions depending on the company. Most companies provided these furloughed new hires a compensation package that included several months salary, relocation assistance and a signing bonus as part of the job offer. A few companies also provided job placement assistance.
- Only 5% indicated that they delayed starting dates anywhere from 6 weeks to 6 months. Most of their new employees understood the decision and were more concerned that their job still existed.
- 13% had to adjust their co-op/internship programs. Many simply reduced the number of positions; usually giving opportunities to returning co-ops/interns. Some companies offered to assist displaced co-ops find a position with another company. Only a few companies eliminated their experiential learning programs for this year.

### Sustaining the Hiring Process

In times of uncertainty, hiring managers can choose to continue normal programs and practices, react strategically, or reduce activity until company hiring needs become clearly defined. In a response to an open-ended question that asked how they were positioning themselves for when hiring activities picked-up, respondents indicated that they were actively marketing their companies to students, maintaining relationships, and strategically analyzing hiring needs. A summary of their responses include:

- On-campus presence through recruiting activities, attendance at career fairs, and presentations/meetings with student organizations. These activities were undertaken even if companies did not have open positions to recruit.
- Relationships with campus career centers, if not being on-campus is not an option; or developing their hiring network if company does not have formal relationships with college campuses.
- Marketing company through college job boards, on-line partners, and advertisements in newspapers and trade magazines.
- Strengthen co-op/internship programs to identify and develop new talent who will be ready when openings occur.
- Strategic planning which may involve focusing on fewer schools, redesigning hiring process, updating resume files, analyzing information on trends and staffing, and restructuring recruiting staff.

**MwACE TEMPERATURE POLL**

**Student attendance at job fairs**

**12% good turnout by engineers/business students\***  
**63% good turnout by all students**  
**25% a so-so turnout by students**

\*usually engineering career fairs

**e-RECRUITING**

In last year’s study, a detailed set of questions were included on the characteristics of e-recruiting. This year a shorter set of questions from the original set was administered. We found that not much has changed in the past year: the level of activity remains about the same and the overall rating on effectiveness hovers at only somewhat to moderate.

Table 16 reviews the findings on how this group of employers utilize the web in their recruiting activities.

- 35% of recruiting activity is conducted through the web; some companies deal exclusively through the Internet while others only want face-to-face contact.
- 16% of the companies that actively use the Web conduct 75% or more of their recruiting activities on the Web.
- 37% of the resumes a company received are through the web.
- 19% of the college hires (median 10%) can be directly attributed to the web.
- The most common positions recruited on the Web are entry-level (53%) and specialists (39%) positions.
- Electronic word searches to screen resumes tend to focus on major, grade point, degree level and selected experiences or skills (e.g. software knowledge). Few searches target behavioral skills, which employers say they want.
- Most employers respond within a couple days (53%) to two weeks (27%) after receiving a resume.
- While 83% indicate that they will expand their e-recruiting efforts, employers find the Internet to be only “somewhat” (38%) to “moderately” (26%) effective in finding the candidates they desire.

**Table 16. Characteristics of e-Recruiting**

Recruiting activity center on Internet	Average 35%
Screening tool utilized with web site	
To direct job seeker to appropriate jobs	29%
To screen candidates	17%
% of applications received through Internet	Average 37%
% of hires attributed to e-recruiting	Average 19%, median 10%
Type of positions listed	
Entry level	53%
Specialists	39%
Staff positions	34%
Manager	31%

Team leader	25%
Executive	16%
Contract for job testing service through web provider	5%
How fast respond?	
Within 24 hours	16%
Within 2 days	37%
Within 2 weeks	27%
Within a month	5%
Only when necessary	16%
How effective is e-recruiting?	
Not at all	10%
Somewhat	38%
Moderately	24%
Fairly	24%
Very	4%
Plan to expand use of e-recruiting	81% Yes

## CANDIDATE CHARACTERISTICS

The “total package”, as described in Appendix E, remains the benchmark for a qualified candidate. Nonetheless, new skills or combination of skills do emerge that college students need to be aware. In response to an open-ended question, participants were free to list the skills that they believed to be critical to insuring success in the workplace beyond the technical skills inherent in their academic major. Their aggregated list serves to reinforce the existing picture. Based on the total number of comments, these skills emerged as the most important:

- Communication, which includes written forms (memos, business letters, grants, business research, and strategic plans), presentations (justify and persuasion), and listening.
- Computer literacy which is ambiguous as some respondents meant this to mean a working knowledge of a suite of office software (specifically Microsoft Office, plus Power Point) while others implied more advanced skills, including programming languages and application software. Companies do expect new hires to use the Web for research, data acquisition, and communication.
- Interpersonal skills including understanding diversity, being empathetic and handling conflict among co-workers. Also included in this set was an increased awareness of human behavior, specifically as it pertains to customer relationships. As one respondent commented: “We don’t hire students who want to go to their cubes and design all day. We’re looking for students who want to build relationships with clients, co-workers, etc. You don’t always see that with engineering students.”
- Teamwork and leadership. Work, communicate, and lead co-workers are essential entry-level requirements. In connection with these skills, more employers would like new hires to have basic business management skills, regardless of major.
- Flexibility (adaptable). Workplace is continually and rapidly changing and new hires have to be able to adjust their work priorities, skill sets, and expectations. Also aligned with these characteristics is sound time management skills.
- Critical thinking that opens one’s creativity and leads to innovation; most systems are now complex and those who see how systems are being integrated will stand out.
- Perspective. While employers expected college students to have hands-on experience in the workplace, they now would like candidates to have a knowledge of the industry – not just the company – to be able to understand how “the whole” maneuvers and is impacted by national/world events and how the company is connected within “the whole”.

## PRIORITIZING CANDIDATE INFORMATION

Faced with choosing from among widely different college students, respondents were asked to rank six characteristics or experiences found on a resume. The most important factor was rated “1” and the rating descended to “6”. Respondents were asked not to give equal ranking to skills – no matter how vigorously they argued. The top rated factor was internship experience followed by academic major. Computer aptitude came in at the bottom.

**Table 17. Ranking of Key Candidate Characteristics**

	<b>Mean</b>	<b>% Rated 1 or 2</b>
Internship experience	2.35	65
Academic major	2.51	54
Leadership experience	3.24	38
Grade point average	3.55	23
Basic computer skills	4.26	12
Technical computer skills	4.69	14

Respondents were prompted to add one candidate characteristic to this list. From the more than 140 responses, these characteristics were considered most frequently:

- Communication skills (writing, speaking, listening)
- Interpersonal skills (work with, understand others in diverse workplace)

These were followed by:

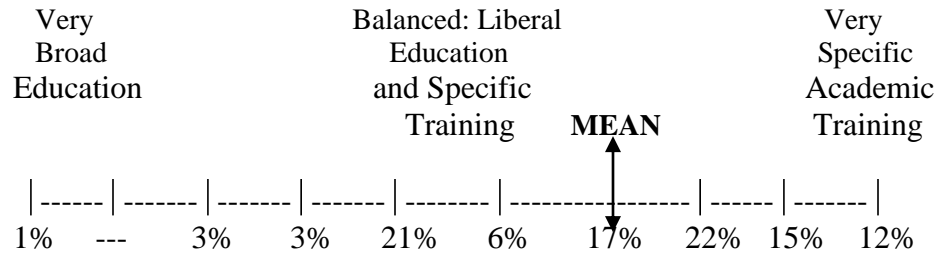
- Work experience
- Extracurriculars
- Attitude

<p><b>MwACE TEMPERATURE POLL</b></p> <p><b>Expectations for on-campus recruiting the rest of year</b>  <b>20% same level of employer visits as last year</b>  <b>42% slightly fewer visits by employers</b>  <b>36% significantly fewer employers visiting</b></p>
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## PERCEPTION OF LIBERAL ARTS

In evaluating the value a candidate can add to an organization, employers were asked to compare a liberally educated individual to one specifically trained in a discipline. The respondents were asked to rate how their organization values education from very broad to very specific. This group of employers held a position above “balanced”. The mean moved toward specific academic training compared to last year. Approximately 49% favored specific education; 37% favored a more balanced academic experience.





**MwACE TEMPERATURE POLL**

**How well are your liberal arts students doing?**

**5% believe liberal arts doing better than last year**  
**73% about the same as last year**  
**22% worse than last year**

### ADJUSTING TO A TIGHT LABOR

When the labor market is expanding and demand exceeds supply, employers seek alternatives to minimize the gap. Strategies would include changing recruiting strategies, accepting alternative degrees, and using salaries and bonuses in order to outbid competitors. Just the opposite occurs in a market where labor supply exceeds demand. Employers can be more selective; falling back on a tighter selection criteria. In most cases this is exactly what happened.

#### RECRUITING STRATEGIES

- 45% agreed that job fairs were best method for recruiting talented candidates; in fact, employers like job fairs where they can connect with many potential candidates. Variations of the traditional job fair have emerged, for example the virtual job fair.
- 44% agreed that on-line recruiting will be the major strategy of the future to find new employees; however, 32% disagree. The response pattern has become more polarized over the past several years.

#### SUBSTITUTES

- 39% agreed (continuing a steady increase in the agreement begun two years ago) that proficiency certificates are becoming more important to the organization
- 68% disagreed that technical graduates with an associate's degree are as qualified as four-year college graduates for many positions in the organization; the change in this figure indicates that less substitution is going on this year.
- 28% agreed that a college degree is not needed to be successful in their organization; 55% disagreed; the loss of IT companies strongly affected the responses to this question.
- 28% agreed that academic majors were becoming less important as college students gain technical competencies; 47% disagreed.
- 9% agreed that employers should have their companies work with high school students and offer them scholarships and training; 79% disagreed. This is a noticeable change from last

year. Small IT and .com companies were big supporters of this approach last year and were absent from the sample.

## **ENVIRONMENT**

- 75% disagreed that the only way to retain good employees is to pay higher salaries; a strong shift that suggests salaries may not be the incentive used to attract new hires this year.
- 85% agreed that employees stay because of an engaging, creative, and supportive environment.

## **COLLEGE-EMPLOYER RELATIONS**

- 36% indicated that their college hires mainly came from participants of their co-op or internship programs. 42% disagreed. The nearly 10% jump in agreement to this question suggests that some employers will likely only hire from their co-op/intern pool this year.
- 17% effectively used alumni career services to find experienced candidates; 66% did not.

## **COMPARISONS ACROSS RESPONDENT CHARACTERISTICS**

- Company size. The largest companies disagreed more strongly that salaries were not as important in retaining employees than smaller firms ( $F=5.219$ ). Small companies, as compared to large companies, believed more strongly that engaging, creative work environments would lead to greater employer retention ( $F=3.138$ ). Small companies were less likely to hire from students in co-op or intern programs ( $F=3.401$ ).
- Hiring status. Those who have firm hiring targets, compared to those who will not hire, agreed more strongly that job fairs were key to finding labor ( $F=3.676$ ). Those companies that were uncertain or preliminary in hiring also agreed that fairs were more important. For employers with uncertain hiring goals, academic major was less important (they agreed) than other companies ( $F=2.971$ ). Companies that will not hire tended to not agree as strongly about a creative environment retaining employees ( $F=7.895$ ).
- Regional differences. North central respondents, while agreeing with the statement that engaging environments retained people, did not agree as strongly as other regions ( $F=10.453$ ). This pattern may reflect differences in the traditional manufacturing industries in the Midwest and the more “new economy” companies found in other regions of the country.
- Economic Sector. Two year graduates were given more favorable consideration in these economic sectors: construction, transportation, health and food and lodging. Success without a college degree would more likely occur in these sectors: construction, wholesale trade, transportation, retail trade, health, performing arts, and food and lodging. All sectors of the economy, with the exception of manufacturing and health, agreed very strongly that engaging, creative environments was why good employees stay with a company.

## **APPENDIX A RESEARCH METHODS**

A list of potential employer contacts was constructed from employers who had responded to the 2000-2001 *Recruiting Trends* survey, and employer members listed in the directories of the Midwest Association of Colleges and Employers and the National Association of Colleges and Employers. The initial contact list totaled slightly more than 4,500 companies.

The initial mailing was sent during the middle of August. After concerted efforts to track down bad addresses or identify appropriate contacts, the final list was about 4,000 contacts. Also deleted from the list were a few companies that declined to participate because of company policy. Later approximately 500 new companies were added to balance economic sections and regions of the country.

A final contact effort was made by telephone to contact those who responded last year or were MwACE members. From this effort, it was estimated that 55% of the contacts were either no longer in the identified position, telephone numbers had changed, or the company was no longer in the location listed in the directory (some merged and some went out of business).

After adjusting the list of employers, approximately 3,700 to 3,900 employers were contacted that could potentially respond. Thus, the response of 287 employers, which represented a 7% response rate.

The survey that employers completed contained six sections. The first section asked for a profile about their organization or unit for which they had recruiting responsibility (size, respondent location, recruiting territory, recruiting techniques, and the five key academic majors they recruited). The second section concerned their college hiring expectations and perceptions of the national and regional labor markets, hiring intentions for 2001-2002 and their actual hires from 2000-01, and the starting salary ranges offered last year and expected this year. The third section covered the employment outlook that concerned employers: incentives, difficulty in finding candidates, and use of Internet for recruiting. The fourth section focused on recruiting issues and factors influencing organization's hiring goals for the year. The fifth section focused on cover various aspects of e-recruiting. Finally the final section regarded issues of interest to college students and college career professionals.

To tell a complete story, employers were asked to complete as many questions as possible, realizing some companies may not have set hiring expectations or want to reveal salaries. We chose to only accept surveys that provided complete information, as was possible.

Key variable definitions that were used in this report are included to clarify the text.

- a. Academic majors: The list was taken from the National Association of Colleges and Employers major categories (a list familiar to many professionals). Added to the list were categories for "all majors," "liberal arts," "all majors in selected categories," (technical, business, etc.) and majors omitted from their list, such as packaging engineer and supply chain management.

- b. Regions of the United States:
- Northeast-Mid-Atlantic:** Maine, Vermont, New Hampshire, Massachusetts, New York, Rhode Island, Connecticut, Delaware, New Jersey, Pennsylvania, and Maryland
- Southeast:** Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, and Kentucky
- Northcentral:** Ohio, Indiana, Michigan, Illinois, Wisconsin, Minnesota, Iowa, Nebraska, North Dakota, and South Dakota
- Southcentral:** Missouri, Arkansas, Louisiana, Texas, Oklahoma, and Kansas
- Southwest:** Colorado, New Mexico, Arizona, Utah, California, and Hawaii
- Northwest:** Wyoming, Montana, Idaho, Oregon, Washington, and Alaska
- c. North American Industrial Classification (taken from Standard Industrial Classification):
- Agriculture and Natural Resources Services:* Establishments engaged in agricultural production, agricultural services, mining activities, forestry and logging, and oil and gas extraction.
- Accommodation and Food Services:* Hotels; motels; food services; drinking establishments.
- Other Services:* religious; civic; private households.
- Arts and Entertainment:* Performing arts; museums, amusement and recreation industries.
- Construction:* Includes contractors and operative builders engaged in construction of residential, industrial, and commercial buildings; heavy construction, such as highways, bridges, etc. are also included; special trade contractors and service providers associated with construction.
- Health Care:* Hospitals; ambulatory care services; nursing and residential care facilities; social assistance.
- Information:* Publishing industry; broadcasting and telecommunication; motion pictures and sound recording; information services and data processing services.
- Management of Companies:* Administrative and support services; waste management; travel services; investigation and security services; services to buildings/dwellings.
- Manufacturing:* Establishments engaged in the mechanical or chemical transformation of materials or substances into new products; also include assembling of component parts and blending of materials.
- Transportation and Warehousing:* All types of transportation services (air, rail, water, and truck), includes support services for transportation; couriers and messengers; storage services.
- Wholesale Trade:* Establishments engaged in selling merchandise to retailers, other wholesalers, or business/industrial users.
- Retail Trade:* Establishments engaged in selling merchandise for personal or household consumption and rendering services incidental to the sale of the goods.
- Finance:* Establishments operating primarily in the fields of finance, insurance, and real estate.
- Professional Services, Scientific and Technical Services:* Provide services to businesses and individuals including legal, accounting, architectural, engineering, design (computer systems and specialized), management consultants; marketing research, including public opinion polls; environmental consulting; scientific research; advertising.
- Public Administration:* Includes activities of federal, state, and local governments, including research by public agencies (space).
- Utilities:* Electric power generation; national gas distribution.
- d. Company size. Respondents were asked to provide the size of the unit that they recruited. The range was reduced to four groups with each group containing approximately 25% of the sample.

All the analyses were conducted using the SPSS statistical package. Access to the data can be requested from the senior investigator, Dr. Phil Gardner.

## APPENDIX B EMPLOYER PROFILE

The characteristics of the 287 responding establishments to this study are provided in this appendix. These employers have a definite Midwest, manufacturing, slant though every section of the country and major industrial sector are represented in the set of responses.

Respondents' Gender: 59% female, 41% male

Location (mailing state) or organization by region:

	<u>n</u>	<u>%</u>
Northeast	42	17
Southeast	23	9
North central	155	64
South central	10	4
Northwest	5	2
Southwest	7	3

Size of Parent Organization (number of employees) that has been grouped into five categories:

<u>Organizational Size</u>	<u>%</u>
138	25
140-600	25
700-3,000	25
>3,200	25

Industrial Sector: For each respondent their major North American Industrial classifications (NAIC) code which, reflected their organizations' products and services was used to assign to industrial sector. Only the first three numerals were utilized. Some companies have more than one NAIC code. This year we chose to only assign the primary or major NAIC code. A computer manufacturer may build components (manufacturing) and sell computers (retail), for example. According to their responses, the group represented these industrial sectors:

<b>Industrial Sector</b>	<b>n</b>	<b>%</b>
Ag/Mining/Nat Resource	2	1
Public Utilities	2	1
Construction	6	2
Manufacturing	94	34
Wholesale	6	2
Retail	17	6
Transportation	3	1
Information	15	5
Finance, Insurance	24	9
Professional Services	77	28
Business Support Services	6	2
Health	4	1
Performing Arts	1	--
Food & Lodging	12	4
Public Administration	5	2

Recruiting Territory: Respondents were asked which areas of the United States that their organizations recruited candidates. They were allowed to check all the areas that applied.

<u>Recruiting Areas</u>	<u>%</u>
International	8
Entire United States	27
Northeast	18
Southeast	19
North central	53
South central	10
Northwest	5
Southwest	10

Techniques and Strategies Used to Recruit College Graduates. Each respondent was asked to check the strategies that their organization used to find qualified college candidates for employment. The following list provides the percentage that utilized the strategy. Employers use a variety of techniques to identify candidates – the most common being “on-campus recruiting.”

<u>Recruiting Technique/Strategy</u>	<u>% Utilizing</u>
On-campus recruiting	86
Organizational web/Internet postings	75
Resume referral by college	67
Job fairs	74
Job listing service (Web)	47
Ads in papers, professional journals	48
Co-op/internship program	69
External staffing prof./consultants	18

Then they were asked to select only their top three strategies used in recruiting. Accordingly 54% indicated that their primary strategy was on-campus recruiting, followed by job fairs and web postings. The other strategies were not as widely used. For those companies with co-op programs, these programs serve as an important source for hiring.

<u>Primary Strategy</u>	<u>n</u>	<u>%</u>
On-campus recruiting	182	24
Job fairs	131	17
Co-op/internship program	121	16
Organization’s Web/Internet posting	117	16
Resume referrals	60	8
Ads in papers, professional journals	61	8
Job listing service (Web)	53	7
External staffing prof./consultants	16	2

Majors Sought: Respondents could identify the top five academic majors they were seeking in 2001-02 (100 respondents selected 5 majors). Employers identified majors, including all majors, all business majors, all technical majors, and all liberal arts. These are the top listed majors.

<b>Scientific Major Sought</b>	<b>n</b>	<b>% of Total</b>
Mechanical	61	7
Electrical	60	7
Computer Science	52	6
Accounting	51	6
All Business	39	4

<b>Majors by College</b>	<b>n</b>	<b>% of Total</b>
Agriculture (Natural Resources) (includes Construction)	20	2
Business	240	26
Communications	36	4
Engineering	327	35
Computer Science	113	12
Social Science	15	2
Natural Science	41	4
Arts & Humanities/Liberal Arts	27	3
Human Ecology	1	--
Allied Health	11	1
All Majors	12	1

\*Biggest loss was in computer science and business; if aggregate arts & humanities/liberal arts/social science about the same as last year.

## APPENDIX C-1

**These average salaries by major serve as benchmarks for comparing the bachelor salary ranges respondents from this study expect to offer this year.**

### Average Salary Bachelor Degree Only Benchmarks: NACE and MSU

Academic Majors	NACE <sup>1</sup> 2001 Salaries (\$)	MSU <sup>1</sup> 2001 Estimates (\$)
Accounting	39,700	39,700
Business Administration	37,800	37,000
Finance	40,800	38,900
Marketing	35,200	34,000
Hospitality	32,100	31,500
Human Resources (not LIR)	34,600	38,400
Logistics/Supply Chain Mgt.	43,900	45,800
Merchandising	---	37,100
Advertising	30,300	32,500
Communications	30,900	31,700
Chemical Engineering	51,200	49,500
Civil Engineering	41,000	39,700
Computer Engineering	53,600	55,100
Electrical Engineering	52,000	49,500
Industrial Engineering	48,200	---
Mechanical Engineering	48,600	50,200
Engineering Technology	45,500	---
Packaging	---	46,800
Computer Science	52,500	51,400
Information Sciences	45,230	---
Management Information Systems	46,600	---
Construction	41,100	43,000
Mathematics	44,300	33,300
Chemistry	38,700	---
Biological Sciences	29,800	28,800
Political Science	32,700	35,200
Psychology	30,000	29,200
Journalism	29,600	26,600
Telecommunications	---	31,900
Criminal Justice	---	33,200

<sup>1</sup>Taken from National Association of Colleges and Employers. Salary Survey: A study of 2000-01 beginning offers. Vol. 40(4). Bethlehem, PA 18017 and Career Services and Placement. The Salary Report for 2000-01 Graduates: An Interim Report. October, 2001. Michigan State University, E Lansing MI 48824. Averages have been rounded for convenience.



## APPENDIX C-2

Major	Expected Salary Range for 2000-2001 (reported last year)	Actual Starting Range Reported (reported this year)	Within Range
<b>Construction</b> BA	40,700-44,500	40,300-41,500	Yes
<b>Manufacturing</b> BA MA PhD	40,700-43,800 53,300-58,600 67,000-70,400	41,700-45,100 53,000-59,400 65,800-70,200	High end High end Yes
<b>Wholesale Trade</b> BA	31,200-34,900	35,200-37,700	Higher
<b>Retail</b> BA MA PhD	33,500-36,900 52,200-57,700 58,250-63,500	33,600-37,100 39,700-46,200 67,300-74,700	High end Lower Higher
<b>Transportation</b> BA	29,600-34,200	31,200-35,900	High End
<b>Information</b> BA MA	36,500-42,700 59,700-70,900	35,900-38,500 46,200-49,900	Lower Lower
<b>Finance/Insurance</b> BA MA	29,300-34,700 47,800-64,000	35,800-38,600 46,900-48,200	Higher Lower
<b>Professional Services</b> BA MA PhD	40,500-44,100 50,500-56,900 59,600-66,900	39,300-43,800 47,100-54,200 52,400-54,800	Yes Lower Lower
<b>Health</b> BA	28,400-33,400	29,700-36,500	High end
<b>Food/Lodging</b> BA MA	27,300-30,200 32,000-36,300	28,900-31,800 30,000	High end Lower
<b>Public Admin.</b> BA MA PhD	30,600-34,300 34,900-38,400 42,200-44,700	34,800-38,300 42,500 58,200	Higher Higher Higher

## APPENDIX D

### Additional Data Tables and Figures

#### Hiring Patterns for Firms of Various Sizes by Degree Level

Firm Size	Average Hires Made 2000-01	Average Hires Expected 2001-02	Expected Change (%)
All graduates			
<138	(60) 7.3	(45) 8.4	+15
140-600	(50) 21.4	(39) 19.9	-7
700-3000	(60) 40.6	(38) 36.2	-11
>3200	(58) 111.9	(44) 77.6	-31
Associates			
<138	(12) 4.1	(7) 4.7	+15
140-600	(12) 2.5	(6) 2.8	+12
700-3000	(10) 3.1	(6) 2.0	-35
>3200	(10) 11.4	(10) 16.0	+40
Bachelors			
<138	(57) 6.0	(38) 8.3	+38
140-600	(52) 18.0	(33) 21.7	+20
700-3000	(62) 23.3	(37) 30.7	+32
>3200	(60) 101.9	(42) 70.6	-31
Masters			
<138	(12) 2.7	(7) 2.4	-11
140-600	(16) 3.2	(12) 2.1	-34
700-3000	(33) 7.6	(20) 8.6	+13
>3200	(36) 11.7	(24) 19.7	-9
PhD			
<138	(6) 2.3	(3) 3.3	+43
140-600	(7) 3.4	(5) 3.4	NC
700-3000	(13) 4.4	(5) 5.0	+14
>3200	(14) 11.9	(11) 6.7	-44

( ) Number of respondents reporting a figure.

**Average Hires in 2000-01 and Expected in 2001-02 by Economic Sector  
(number of observations)**

<b>Economic Sector</b>	<b>Average Hires Made 2000-01</b>	<b>Average Hires Expected 2001-02</b>	<b>% Change</b>
<b>All graduates</b>			
Ag/Mining	(2) 6.5	(2) 5.0	-23
Construction	(5) 4.4	(4) 5.3	+20
Manufacturing	(73) 50.22	(50) 24.54	-51
Wholesale	(6) 9.7	(4) 8.0	-17
Retail	(15) 29.5	(9) 25.8	-12
Transportation	(3) 50.0	(2) 37.5	-25
Information	(15) 90.17	(10) 76.9	-15
Finance	(20) 49.3	(18) 52.7	+7
Professional servs	(66) 55.6	(49) 29.8	-46
Food and Lodging	(11) 5.0	(7) 16.9	+13
Public Admin.	(3) 93.3	(3) 121.7	+30
<b>Associates</b>			
Manufacturing	(8) 1.4	(7) 1.1	-21
Finance	(3) 2.00	(4) 2.5	--
Retail	(3) 14.3	(1) 40.0	*
Information	(3) 5.00	(2) 5.00	NC
Professional servs	(14) 4.7	(6) 13.8	>100
Food & Lodging	(6) 3.3	(2) 7.5	>100
Public Admin.	(2) 15	(2) 15	NC
<b>Bachelors</b>			
Ag./Nat. Res.	(2) 5.5	(2) 4.5	-18
Construction	(5) 4.2	(4) 4.7	+12
Manufacturing	(77) 42.2	(45) 22.3	-47
Wholesale	(6) 8.5	(4) 7.3	-14
Retail	(13) 35.4	(7) 26.0	-26
Transportation	(3) 41.7	(2) 30.0	-28
Information	(15) 81.7	(10) 66.0	-19
Finance	(20) 46.7	(17) 51.8	+11
Professional servs	(66) 38.8	(41) 31.5	-19
Food and Lodging	(11) 13.1	(7) 14.6	+11
Public Admin.	(3) 69.3	(3) 95.0	+37

<b>Masters</b>			
Manufacturing	(34) 13.3	(26) 6.1	-54
Retail	(4) 2.8	(1) 5.0	*
Information	(6) 13.8	(3) 22.3	+61
Finance	(7) 6.0	(7) 8.3	+38
Professional servs	(31) 5.8	(16) 6.4	+10
Public Admin.	(2) 7.0	(2) 20.0	>100
<b>PhD</b>			
Manufacturing	(21) 4.5	(15) 3.4	-24
Professional servs	(9) 8.7	(2) 1.0	-88
Retail	(2) 2.0	(2) 2.5	+25
Public admin	(1) 7.0	(1) 10.0	+43
Information	(4) 9.0	(2) 16.00	+78

( ) Number of respondents providing information. Some sectors were not included at some degree levels because observations were insufficient for reliable results.

\* Too few observations to calculate.

**Average Number of Hires in 2000-01 and Expected in 2001 –02  
by Everyone Who Recruited at Least One Major from These Categories**

<b>Academic Major</b>	<b>Average Hires Made 2000-01</b>	<b>Average Hires Expected 2001-02</b>	<b>% Change</b>
<b>All graduates</b>			
Business	(262) 56.1	(193) 43.2	-23
Engineering	(302) 50.3	(202) 32.8	-35
Computer Science	(105) 64.6	(66) 42.8	-34
Liberal Arts	(414) 64.6	(31) 79.0	+22
Science	(42) 35.4	(24) 53.4	+51
Ag/Construction	(18) 24.5	(17) 32.2	+31
Allied Health	(8) 9.0	(9) 8.5	-5
Communication	(31) 25.5	(15) 20.4	-20
<b>Associates</b>			
Business	(38) 5.9	(25) 8.8	+49
Engineering	(43) 5.7	(19) 13.7	>100
Computer Science	(18) 8.1	(13) 17.1	>100
Liberal Arts	(11) 3.9	(6) 7.0	+79
Science	(22) 1.6	(5) 3.0	+87
Ag/Construction	(5) 1.8	(6) 1.7	NC
Allied Health	(2) 3.0	(2) 2.5	-17
Communication	(8) 1.6	(2) 2.5	+56
<b>Bachelors</b>			
Business	(261) 48.6	(185) 39.9	-18
Engineering	(311) 32.5	(184) 29.1	-10
Computer Science	(107) 42.7	(65) 35.3	-17
Liberal Arts	(44) 62.2	(31) 76.3	+23
Science	(44) 32.8	(24) 45.3	+38
Ag/Construction	(18) 22.9	(17) 30.2	+32
Allied Health	(4) 7.7	(5) 6.8	-9
Communication	(30) 24.9	(15) 19.5	-21
<b>Masters</b>			
Business	(90) 11.1	(61) 8.1	-27
Engineering	(165) 12.0	(100) 7.5	-37
Computer Science	(60) 11.6	(33) 10.6	-9
Liberal Arts	(14) 4.0	(10) 3.6	-10
Science	(25) 6.9	(13) 11.3	+64
Ag/Construction	(8) 2.5	(5) 4.8	+92
Allied Health	(1) 2.0	(2) 5.5	->100
Communication	(8) 3.9	(4) 2.7	-30

<b>Doctoral</b>			
Business	(29) 8.4	(15) 8.4	NC
Engineering	(69) 9.0	(34) 7.0	-22
Computer Science	(20) 8.0	(9) 6.3	-21
Liberal Arts	--	--	--
Sciences	(14) 7.0	(5) 6.6	-6
Ag/Construction	--	--	--
Allied Health	(4) 3.7	(5) 5.4	+46
Communication	--	--	--

( ) Number of respondents providing information.

## **APPENDIX E TOTAL PACKAGE**

**THE ENTIRE PACKAGE:** What do employers want to see when they begin evaluating college candidates for employment? The entire package! Extracted from responses to the question, “What are the five most important skills or competencies that a candidate needs to possess in order to be considered for employment?” The “total package” that candidates should possess includes these skills:

**The Total Package:** Candidates need to be academically prepared in their discipline as it pertains to their employment – this is considered a given by employers. Plus,

1. Communication skills (228 comments) that demonstrate solid verbal, written, and listening abilities. The capstone is presentation skills that include the ability to respond to questions and serious critique of the presentation material.
2. Computer/technical aptitudes (124 comments) based on the level required for the position being filled. Computer ability is now perceived as a given core skill; right up there with reading, writing, and mathematics. The ability levels (expectations) for computer knowledge and application continue to rise.
3. Leadership (82 comments) – the ability to take charge or relinquish control (followership) according to the needs of the organization; closely aligned with possessing management abilities.
4. Teamwork (70 comments) – working cooperatively and collaboratively with different people while maintaining autonomous control over some assignments.
5. Interpersonal abilities (80 comments) that allow a person to relate to others, inspire others to participate, or mitigate conflict between co-workers.
6. Personal traits. The shape of the above competencies are molded by a combination of personal traits, specifically demonstrate initiative and motivation; flexible/adaptable to handle change and ambiguity; hard-working (work ethic) and reliability; honesty and integrity; and ability to plan and organize multiple tasks. Emerging as a key personal trait is an individual’s ability to provide “customer service” – anticipating customer needs and the demeanor to respond positively to customer concerns.

**The Wrapping:** Several skills or experiences bind the package and are essential to holding it together. Without these skills, a candidate may not be able to deliver the package.

1. Critical thinking/problem solving – the ability to identify problems and their solutions by integrating information from a variety of sources and effectively weigh alternatives.
2. Intelligence and common sense.
3. Willingness to learn quickly and continuously.
4. Work related experiences that provided an understanding of the workplace and served to apply classroom learning.

This list should be no surprise to anyone – these skills and competencies have been bantered about since the new economy began to emerge in the late 1980’s. Why this section needs our attention is the context in which many employers expressed their qualifications. Because the economy is moving so quickly, candidates must enter their position already demonstrating their command of these competencies. There is no time or the luxury of training a highly qualified academic candidate in these skills. Employers demand that the “total package” be delivered at graduation.