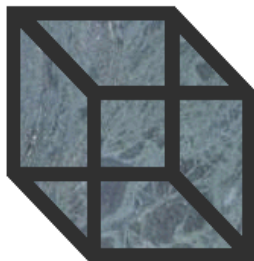


# Career Cornerstone News

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Career Cornerstone News is a Publication of the Sloan Career Cornerstone Center... the Premier Online Resource for Exploring Career Paths in Science, Technology, Engineering, and Mathematics.

## Half of Hiring Managers Plan to Recruit New Employees in Q3

CareerBuilder.com has released the results of its latest survey tracking projected hiring and job search activities for the upcoming quarter. The survey, "Q3 2005 Job Forecast," indicated that 75% of hiring managers had added workers over the last six months to expand operations, support new product launches, improve

customer service, and drive more revenue. Although tracking below projections for the second quarter, hiring activity for the third quarter is expected to remain strong. While 39% of hiring managers are electing to slow recruitment over the summer months, one-half of hiring managers anticipate increasing their

staffs. The leading areas for new job requisitions include healthcare, sales, accounting/finance, information technology, retail and customer service.

All of these areas offer interesting career paths for those with degrees in science, technology, engineering, or mathematics.

## Chemical Engineer Profile: Deborah Grubbe

Deborah Grubbe has worked as a chemical engineer for twenty-seven years and currently is Vice President of Group Safety for BP -- the fifth largest company in the world. Deborah recently joined BP and previously worked for DuPont. At DuPont she held director level positions in operations, engineering management, and safety. Her responsibilities in all of these positions, at both BP and at DuPont, include setting strategic direction and actions to support business success. She started her career with summer jobs at various firms. "I tried to find out what I wanted to do," Deborah explains. "I was not well suited to research, so I explored

design engineering. But my skills in design were not yet advanced enough and I moved on to work at a plant in manufacturing. I found that I really enjoyed this work, the interaction with people, and the implementation of engineering concepts."

Asked what she considers the most rewarding thing about being an engineer, Deborah replied, "I have a great job and meet great people! I travel all over the world, and get to know folks in China, Japan, Australia, and Brazil. Engineering is really very, very special work, and it helps the world be a better place, too. I have worked on super projects that make things that save people's lives!"



Deborah's advice to students is to take all the math and science courses they can get their hands on. She also recommends adding a foreign language.

Read more about Deborah Grubbe in the Career Cornerstone "Profiles of Chemical Engineers" website section.

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## Hiring Up 13% for Class of 2005

2005 college graduates have reason to be optimistic about their job prospects: Employers expect their college hiring for 2004-05 to surpass that of 2003-04 by 13%, according to a new study published by the National Association of Colleges and Employers (NACE).

Overall, 61.4% of respondents to "Job Outlook 2005 Spring Update" expect to hire more new college graduates in 2004-05 than they hired in 2003-04. Service sector employers



project the most positive hiring picture: On average, they plan to hire 13.9% more new college graduates in 2004-05 than they did in 2003-04. Manufacturers paint a similarly positive picture: On average, they plan to hire 13.4% more graduates this year than they did in 2003-04. By region, employers in the Midwest predict the biggest increase, projecting college hiring to increase by 15.1% over 2003-04 levels. Employers in the West and Northeast report similar increases in their college hiring.

Given the positive hiring projections, it's not surprising that more than three-quarters of employers reported an increase in competition for hiring new college graduates. "We've seen evidence of increased competition in terms of starting salary offers," says Camille Luckenbaugh, NACE research director. "About half of employers told us that they had raised or would be raising their starting salaries, and we've seen average starting salary offers rise this year in a number of disciplines." And there are signs that competition will carry over to next year's college graduates.

## Degree Profile: Mathematics

Business, industry, and government use mathematical expertise, often in the context of applications. However, the job titles often do not include the word "mathematics" or "mathematician," but do involve significant use of mathematics and/or quantitative reasoning. For people with advanced degrees in mathematics, careers involve development of new mathematical methods and theories and application to almost every area of

*The use of Mathematics is pervasive in modern industry.*

science, engineering, industry and business. Those who major in mathematics in undergraduate institutions find a broad variety of opportunities. Some use their mathematical training directly and some use their training in rigorous thinking and analysis indirectly to solve problems in the business sector.

The use of mathematics is pervasive in modern industry. The result is that mathematicians are found in almost every sector of the job market, including engineering research, telecommunications, computer services and software, energy systems, computer

manufacturers, aerospace and automotive, chemicals and pharmaceuticals, and government laboratories, among others.

The spectrum of the field is perhaps best illustrated by observing the role of



mathematics as it applies to different products.

Find out more about Careers in Mathematics and explore "Profiles of Mathematicians" at [www.careercornerstone.org](http://www.careercornerstone.org).



# Middle and High School Students Need College and Career Plans

Many of America's middle and high school students need more help from schools to effectively plan for the future, according to a recent study by ACT. The study suggests that many students don't start thinking about their post-high school plans early enough, and that those who do may not be taking the right classes to prepare to meet their goals.

The results of the study, a survey conducted among nearly 3,000 middle school and high school students in six different states, show that close to one-fourth (22%) of eighth and ninth grade respondents had not yet even thought about their post-high school plans, let alone planned a program of study to help them meet their goals. In addition, only two-thirds of the students who were planning to attend college said they were taking a college preparatory program of study in high school. Only slightly more -- seven in 10 -- had begun to consider ways to finance college

or training. "There is clearly a disconnect between students' post-high school goals and their plans to meet those goals," said Richard J. Noeth, director of ACT's Office of Policy Research. "The most important element for middle and high school students in preparing for the future is to take the right courses, and too few are doing that now."

The ACT report, titled "College Readiness Begins in Middle School," suggests one reason students are not planning properly is that they may not be relying on their schools for guidance. The study found that students are relying more on parents and friends than on trained school personnel for help in selecting their high school classes. Fewer than two-thirds (63%) of respondents said they received help from a guidance counselor in selecting their classes, and around one-fourth (27%) said they were



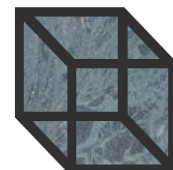
helped by a principal. In comparison, the overwhelming majority named their mother (92%), father (84%), or friends (85%) as sources who provided help in selecting high school courses. "Trained school personnel know what classes students should take to be prepared for college and careers," said Noeth.

"Parents and friends certainly have the student's best interests at heart and are strong sources of support, but unless the school district has a formal parent information program that focuses on educational and career planning, parents may not always be well enough informed to provide accurate advice."

## Career Cornerstone Explores Career Paths in...

- Aerospace Engineering
- Bioengineering
- Biological Sciences
- Chemical Engineering
- Chemistry
- Civil Engineering
- Information Technology
- Electrical Engineering and Computer Science
- Engineering Technology
- Geosciences
- Industrial Engineering
- Materials Science and Engineering
- Mathematics
- Mechanical Engineering
- Nuclear Engineering
- Physics
- And...others to come!

*Find out more at [www.careercornerstone.org](http://www.careercornerstone.org)*



## Parent Perspectives on Science and Engineering Career Paths

The Bayer Corporation has recently released "The Bayer Facts of Science Education XI: American Parents Speak Out About Their Children and Science" as part of its Making Science Make Sense program. This year's survey examined the issue of under-representation of women, African-Americans, Native Americans and Hispanic Americans in science and engineering fields from their parents' point of view. The survey of American parents who have at least one boy and one girl between the ages of 5 and 18 living at home found that parents see science and engineering careers as desirable for their sons (91%) and their daughters (86%). And, upon learning that many jobs

in these fields do not require advanced degrees beyond a bachelor's, most parents (88%) believe these fields present realistic job opportunities for their children. However, almost all parents across the board (88%) believe the science and engineering communities need to do a better job telling today's students about job opportunities. "The science and engineering communities not only need to do a better job communicating the myriad job opportunities to students, we need to work much harder at letting them -- and their parents -- know that we want and need them in these fields," said Dr. Attila Molnar, Bayer Corporation president and CEO.

Parents agree. They believe the science and engineering communities (92%), together with parents themselves (98%) and others, share responsibility for ensuring women and minorities succeed in these fields. In addition, many agree (72%) the science and engineering communities should develop programs that attract, encourage and retain girls' and minority students' interest in science and math. Almost all parents (81%) believe science should be the fourth "R" in elementary school and given the same emphasis as reading, writing and math. Links to the report are found on the Career Cornerstone News link at [www.careercornerstone.org](http://www.careercornerstone.org).

## University Listings for STEM Degrees Online

The Sloan Career Cornerstone Center has recently updated its listing of universities offering degree programs for many science, technology, engineering, and mathematics (STEM) disciplines. All university listings may be viewed online or downloaded in PDF format for easy sharing in classrooms and career centers. Listings of variety of accredited Engineering Technology degree programs are also provided. URLs for each university are also provided.



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