

# **HOT** Careers

A SPECIAL REPORT FOR RECENT AND MID-CAREER COLLEGE GRADUATES

for College Grads and Returning Students 2014

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# Introduction

The transition from college to a career is increasingly challenging. In the current economic environment recent college graduates can benefit from essential information about employment trends and job choices. UC San Diego Extension has assembled the sixth annual edition of “Hot Careers for College Graduates” with a clear goal—to provide recent college graduates with a specific list of some promising careers options.

As a division of one of the leading research universities in the United States, UC San Diego Extension has developed a comprehensive understanding of the job market and the skill sets that diverse employment sectors need. Extension’s Center for Research on the Regional Economy regularly analyzes economic forces and business needs in order to serve our constituents more than 63,000 enrollees, which translates to 33,000 individuals who annually enroll in approximately 4,300 courses and 100 certificate programs.

In this report, we see a number of positive trends for college graduates on the heels of the global recession of 2009. A recent survey by the National Association of Colleges and Employers found that, on average, businesses plan to increase the number of new college graduates they hire this year by nearly 9 percent. Our objective in the “Hot Careers” report is to pinpoint where businesses are looking to expand and where job growth likely will be in the immediate future.

As our team analyzed the economic landscape, several important trends emerged. Technology continues to drive job creation, and many of the growing careers are tied to technological changes ranging from cloud computing to the need for easily accessible data in the world of health care. The financial sector continues to need college graduates with analytical and marketing skills who can make companies more competitive. Additionally, education remains a transforming force in an economy which values not only a skilled, but a flexible workforce.

This report uses an algorithm to identify and rank a list of “hot career” categories that can realistically be filled by recent college graduates. Some careers on the list require additional education or training beyond a bachelor’s degree, but none require a master’s or doctorate degree.

For six years now, the research team at UC San Diego Extension has been committed to providing the public with in-depth analyses regarding the economic forces and employment trends that shape the opportunities available to recent college graduates. I would like to acknowledge Henry DeVries, MBA, for spearheading this effort, and especially Josh Shapiro, Ph.D., sociology, and Sundari Baru, Ph.D., economics, for collecting the data and performing the algorithmic analyses for this year’s report.

I am also appreciative of the work of the more than 230 staff members and hundreds of instructors at UC San Diego Extension who open the doors to new opportunities for people throughout the region. Together, we are educating individuals to achieve their goals, regardless of where they are in the continuum of work—from recent college graduates to mid-career professionals.

Sincerely,



Mary L. Walshok, Ph.D.  
Associate Vice Chancellor of Public Programs and Dean of Extension

# Methodology

## Just what constitutes a “Hot Career”?

Wage and employment data from the United States Bureau of Labor Statistics’ (BLS) Occupational Employment Statistics determine the foundational parameters of the “hot career” designation. The Hot Careers list is to be used as a broad analysis of the best jobs for people with at least a bachelor’s degree.

This report used the BLS employment projections for 2012-2022 to develop a list of jobs with the most projected openings in 2022. The jobs were scored on a scale of 0-25, with the jobs that had the largest number of openings scoring 25, and those with fewer openings stepping down to lower scores. The research team also mined the BLS data to get the list of jobs with fastest expected growth. These jobs were also scored on a 25-point scale, with the fastest growing jobs getting the maximum points. Based on these two criteria, the team extracted a list of the top 40 best jobs, weighting both these criteria equally.

The 40 top jobs were then evaluated for nine attributes of the work environment:

- Duration of typical work week
- Level of competition
- Frequency of conflict situations
- Indoor, environmentally controlled work space
- Time pressure
- Need to deal with unpleasant or angry people
- Responsibility for others’ health and safety
- Consequences of errors
- Time spent standing

Each attribute’s score was obtained from [www.onetonline.org](http://www.onetonline.org) and was weighted equally on a 25-point scale.

Median pay is an essential component of a promising career, and the wages for the top 40 jobs also were obtained from the BLS and scored on a 25-point scale.

The points from the criteria of job availability and growth, work environment and wages were added for a maximum of 100 points. The list was condensed to the top 25 jobs by eliminating management and other positions that can be achieved only with several years of work experience.

The cumulative score was then used to determine the rankings of the occupations in the Hot Careers list. A fifth dimension, “bridgeability,” was applied as a simple criterion to include or exclude a given career from this particular list, but did not affect the weighted total score of the career. Its sole purpose was to eliminate careers that recent college graduates could not easily “bridge to” with minimal or no training beyond an undergraduate degree. Using this methodology reveals a clear pattern as to where employment opportunities are growing.

# Results

Here is what the algorithm revealed about what constitutes a hot career in today’s world for recent and mid-career college graduates. The table below shows how the top eighteen careers, labeled by Standard Occupational Classification (SOC) code, were scored and ranked:

SOC code*	Occupation Title	Current Employment
15-1121	Computer Systems Analysts	76.00
13-1161	Market Research Analysts and Marketing Specialists	74.57
13-2011	Accountants and Auditors	72.07
13-1111	Management Analysts	71.18
25-2021	Elementary School Teachers, Except Special Education	67.08
13-1051	Cost Estimators	67.07
13-2051	Financial Analysts	64.22
15-1141	Database Administrators	62.95
15-1131	Computer Programmers	60.28
13-1121	Meeting, Convention and Event Planners	58.33
15-1143	Computer Network Architects	57.78
29-1031	Dietitians and Nutritionists	57.25
21-1021	Child, Family, and School Social Workers	57.08
25-2012	Kindergarten Teachers, Except Special Education	56.53
21-1091	Health Educators	55.28
19-2041	Environmental Scientists and Specialists	54.75
13-1071	Human Resources Specialists	54.58
27-1024	Graphic Designers	52.97
11-9031	Education Administrators, Preschool and Childcare Center	45.83

\*Standard Occupational Classification Code

The first column in the chart is the classification code for each job as determined by the Bureau of Labor Statistics for the Occupational Employment Statistics Database. Note: career fields contain various jobs, and the researchers looked at both jobs and careers

# Top Ten Hot Careers for 2014

## 1. Computer Systems Analysts

The landscape of information technology changes rapidly, and organizations throughout the globe need computer systems analysts to remain competitive and address the incredible speed of technological innovation and change.

Computer systems analysts study an organization's current computer systems and procedures and design information systems solutions to help the organization operate more efficiently and effectively. They bring business and information technology (IT) together by understanding the needs and limitations of both.

Systems analysts must understand the business field in which they work. For example, a hospital may want an analyst with a background or coursework in health management, and an analyst working for a bank may need to understand finance. Analysts work as a go-between with management and the IT department and must be able to explain complex issues in a way that both will understand. Because analysts are tasked with finding innovative solutions to computer problems, an ability to "think outside the box" is important.

The career-entry pathway is also relatively broad; systems analysts may hold almost any bachelor's degree. Although a degree in computer or information science may lower barriers to entry-level hiring, it is not specifically a minimum job requirement. Understanding of computer systems, project management, and some experience writing code are just as important to secure a position in this growing field. Firms searching for individuals who can solve broad problems are increasingly hiring analysts with liberal arts or business degrees.

According to the BLS, employment of computer systems analysts is projected to grow 25 percent by 2022, much faster than the average for all occupations. Growth in cloud computing, cyber security, and mobile networks will increase demand for these workers. The BLS reported that the median annual wage for computer systems analysts was \$79,680 in May 2012.

## 2. Market Research Analysts and Marketing Specialists

In a world where companies are constantly evaluating returns on investments, market research analysts provide essential data to help determine a company's position in the marketplace by researching their competitors and analyzing their prices, sales, and marketing methods. Using this information, they may determine potential markets, product demand, and pricing. They collect data using a variety of methods, from interviews, questionnaires, focus groups, market analysis surveys to public opinion polls and literature reviews.

Marketing specialists ensure that organizations take this information to develop the strategies and tactics to engage consumers and constituents. They focus on building effective marketing machines that include compelling websites, effective use of social media and media relations campaigns and collateral material.

The BLS reports that employment of market research analysts and specialists is projected to grow 32 percent by 2022, much faster than the average for all occupations. Employment growth will be driven by an increased use of data and market research across all industries—to understand the needs and wants of customers and to measure the effectiveness of marketing and business strategies.

According to the BLS, companies are increasingly using research on consumer behavior to develop improved marketing strategies. By doing so, companies are better able to market directly to their target population. In addition, market research provides companies and organizations with an opportunity to cut costs. According to the BLS, the median annual wage for market research analysts was \$60,300 in May 2012.

### 3. Accountants and Auditors

“If the world wants to address our many challenges — if business wants to restore societies’ trust — business must be more transparent and acknowledge that the resources we exploit or conserve and the social benefits we engender or lose, must be factored into a company’s value and thus into day-to-day management,” Peter Bakker, president of the World Business Council for Sustainable Development, recently argued in the Harvard Business Review. “This is not a matter of incremental change, but a radical transformation. And it’s the accountants who will lead the way.”

Accountants ensure that all financial transactions are accurately entered into an entity’s books in a timely way, manage activities related to taxes and compliance with financial regulation, and monitor financial operations to ensure economic efficiency and transparency.

A bachelor’s degree in accounting is the best way to gain an entry-level position in this field. Other degrees in closely related fields may suffice and college graduates with strong math and economics skills are viable candidates for certificate programs in accounting.

According to the BLS, the median annual wage for accountants and auditors was \$63,550 in May 2012. The BLS reports that employment of accountants and auditors is projected to grow 13 percent by 2022, about as fast as the average for all occupations. In general, employment growth of accountants and auditors is expected to be closely tied to the health of the overall economy. There has been an increased focus on accounting in response to corporate scandals and recent financial crises, the BLS points out. And tighter laws and regulations, particularly in the financial sector, will likely increase the demand for accounting services as organizations seek to comply with new standards. The continued globalization of business should also lead to increased demand for accounting expertise and services related to international trade and international mergers and acquisitions.



## 4. Management Analysts

Optimization has become a buzzword in the world of business. Management analysts propose ways to improve an organization's efficiency—they advise managers on how to make organizations more profitable through reduced costs and increased revenues.

Management analysts determine the methods, equipment, and personnel that will be needed to complete a project or achieve an organization's goals. They propose new systems, procedural and, or organizational changes, make recommendations to management through presentations or written reports, and confer with managers to ensure that the changes are working

Management analysts often specialize in certain areas, such as inventory management or reorganizing corporate structures to eliminate duplicate and nonessential jobs. Some consultants specialize in a specific industry, such as healthcare or telecommunications. In government, management analysts usually specialize by type of agency.

According to the BLS, a bachelor's degree is the typical entry-level requirement for management analysts. However, some employers prefer to hire candidates who have a master's degree in business administration (MBA); the Certified Management Consultant (CMC) designation may improve job prospects. Few colleges and universities offer formal programs in management consulting; however, many fields of study provide a suitable education because of the range of areas that management analysts address. Common fields of study include business, management, economics, political science and government, accounting, finance, marketing, psychology, computer and information science, and English.

The BLS reports that employment of management analysts is projected to grow 19 percent by 2022, faster than the average for all occupations, and the median annual wage for management analysts was \$78,600 in May 2012. The BLS projects that demand for consulting services is expected to grow as organizations seek ways to improve efficiency and control costs in areas ranging from information technology to human resources.

## 5. Elementary School Teachers (excluding Special Education)

Education and learning experts have long argued that the success of the education system is inextricably linked to early childhood education. Elementary school teachers provide essential experiences for children as they progress through the system—they are generalists who move easily from talking about history to mathematics to geography as they influence the learning habits of their students.

Being an elementary school teacher is at once a satisfying and demanding job. Teachers are required by statute to demonstrate the ability to help students achieve prescribed scores on national, state, and district standards, even as they introduce more intangible social concepts, such as adhering to social norms, obeying classroom rules, and following rules of etiquette. Teachers spend far more time on the job than the hours spent in the classroom. After class ends, they create lesson plans, grade assignments, evaluate individual and class academic performance, devise and implement strategies to improve student progress, and communicate effectively and collaboratively with parents to ensure their charges meet specified criteria in the building blocks of future study.

All states require public elementary school teachers to have at least a bachelor's degree, as well as a teacher's license, certificate or credential; however, specific requirements vary by state. Teachers must also typically pass a background check, complete a teacher preparation program, and demonstrate classroom competence through supervised student teaching or a more lengthy and rigorous semester- or year-long teaching internship.

According to the BLS, the median annual wage for elementary school teachers was \$53,400 in 2012. Employment of kindergarten and elementary school teachers is projected to grow 12 percent by 2022, about as fast as the average for all occupations. Growth is expected due to projected increases in enrollment as well as declines in student–teacher ratios; however, employment growth will vary by region.

The BLS projects that the number of students enrolling in kindergarten and elementary schools is expected to increase over the coming decade, and the number of classes needed to accommodate these students will also rise. As a result, more teachers will be required to teach these additional classes of kindergarten and elementary school students.

The BLS reports that although overall student enrollment is expected to grow, there will be some variation by region. Enrollment is expected to grow fastest in the South and West. In the Midwest, enrollment is expected to hold steady, and the Northeast is projected to have declines. As a result, employment growth for kindergarten and elementary school teachers is expected to be faster in the South and West than in the Midwest and Northeast.

## 6. Cost Estimators

Cost estimators combine technical expertise with the ability to collaborate with engineers, architects or other clients to achieve project goals. Accurately predicting the cost, size, and duration of future construction and manufacturing projects is vital to the survival of businesses. Cost estimators' calculations give managers or investors this information.

Cost estimators collect and analyze data in order to estimate the time, money, materials, and labor required to manufacture a product, construct a building, or provide a service. They generally specialize in a particular industry or type of product. Depending on their area of expertise, they must have the ability to read blueprints or technical documents, use computer software to calculate estimates and analyze databases on the costs of similar projects. Some manufacturing cost estimators work in software development. Many high-technology products require a considerable amount of computer programming, and calculating the costs of software development requires significant expertise.

The typical path to entry is a bachelor's degree in a related field—construction management or building science for construction jobs, or engineering, physical sciences or mathematics for manufacturing. New hires often learn the industry by being teamed with a veteran.

The median annual wage for cost estimators was \$58,860 in May 2012. According to the BLS, employment of cost estimators is projected to grow 26 percent by 2022, much faster than the average for all occupations. The BLS projects that demand for cost estimators is expected to be strong because companies need accurate cost projections to ensure that their products and services are profitable. For this reason, cost estimators are essential to companies.

Growth in the construction industry will create the majority of new jobs, the BLS reports--in particular, the construction and repair of infrastructure, including roads, bridges, airports, and subway systems, will drive demand for qualified estimators.

## 7. Financial Analysts

Financial analysts provide guidance to businesses and individuals making investment decisions. Financial analysts evaluate investment opportunities. They work in banks, pension funds, mutual funds, securities firms, insurance companies, and other businesses. They assess the performance of stocks, bonds, and other types of investments.

Financial analysts generally focus on trends affecting a specific industry, geographical region, or type of product. For example, an analyst may focus on a subject area such as the energy industry, a world region such as Eastern Europe, or the foreign exchange market. They must understand how new regulations, policies, and political and economic trends may affect investments.

With the globalization of business, financial analysts must not only understand how to analyze a company's investment portfolio—they must understand international trends in business and how culture and consumer growth trends affect bottom lines.

Most positions require a bachelor's degree and business schools are often the training grounds for financial analysts. A number of fields of study provide appropriate preparation, including accounting, economics, finance, statistics, mathematics, and engineering. The Financial Industry Regulatory Authority (FINRA) is the main licensing organization for the securities industry. It requires licenses for many financial analyst positions, and most of the licenses require sponsorship by an employer, so companies do not expect individuals to have these licenses before starting a job.

The median annual wage for financial analysts was \$76,950 in May 2012, according to the BLS, and employment of financial analysts is projected to grow 16 percent by 2022, faster than the average for all occupations. The BLS projects that a growing range of financial products and the need for in-depth knowledge of geographic regions are expected to lead to strong employment growth.

Investment portfolios are becoming more complex, and there are more financial products available for trade. In addition, emerging markets throughout the world are providing new investment opportunities, which require expertise in geographic regions where those markets are located, the BLS reports, and restrictions on trading by banks may shift employment of financial analysts from investment banks to hedge funds and private equity groups.

## 8. Database Administrators

Database administrators are ubiquitous in the global economy, helping organizations store, organize and manage the exponentially increasing amounts of information in the world. They have a two-fold mission—they make sure that data are available to users and are secure from unauthorized access.

Database administrators, often called DBAs, make sure that data analysts can easily use the database to find the information they need and that the system performs as it should. DBAs sometimes work with an organization's management to understand the company's data needs and to plan the goals of the database. Database administrators are responsible for backing up systems to prevent data loss in case of a power outage or other disaster. They also ensure the integrity of the database, guaranteeing that the data stored in it comes from reliable sources.

Most database administrators have a bachelor's degree in management information systems (MIS) or a computer-related field. Firms with large databases may prefer applicants who have a master's degree focusing on data or database management, typically either in computer science, information systems, or information technology. Database administrators need an understanding of database languages, the most common of which is Structured Query Language, commonly called SQL.

The Bureau of Labor Statistics projects that there will be explosive growth for DBAs in two areas—cloud computing and the healthcare industry. The increasing popularity of cloud computing services could increase the employment of DBAs at firms by 48 percent in this industry by 2022, according to the BLS, and employment growth for database administrators in healthcare industries is projected to grow by 43 percent in general medical and surgical hospitals by 2022. The median annual wage for database administrators was \$77,080 in May 2012, the BLS reports, and the overall DBA employment is projected to grow 15 percent by 2022, faster than the average for all occupations.

## 9. Computer Programmers

The role and scope of computer programmers have changed significantly with the evolution of computing and software development in the past several decades. In the fledgling days of computing, programmers were often solitary figures writing a single program to solve an organization's problem. Today, they work collaboratively to translate designs created by developers, engineers or CEOs into programs that will advance a company's mission.

The environment for computer programmers has changed dramatically, as well, with the increasing market for programs for smart phones and social media as well as the move toward open-source software. The BLS reports that with globalization and the reality that computer programming can be done from anywhere in the world, many companies are hiring programmers in countries where wages are lower. This trend is projected to limit growth for computer programmers in the United States, according to the BLS, and employment of computer programmers is projected to grow 8 percent from 2012 to 2022, about as fast as the average for all occupations.

Still, the BLS projects that many computer programmers work in computer system design and related services, an industry which is expected to grow as a result of an increasing demand for new computer software. Demand for new applications in the fields of mobile technology and healthcare are driving job growth in programming. There are increasingly new opportunities for entrepreneurial programmers in the world of mobile applications, as these programmers write and market their own software for a global market that exceeds 1 billion customers.

The BLS reports that the median annual wage for computer programmers was \$74,280 in May 2012, well above the median for most jobs in the United States.

## 10. Meeting, Convention, and Event Planners

Meeting and event planners can have a broad scope of responsibilities—whether it’s helping a family define the details of a wedding or assisting multinational corporations with the planning of an annual event that brings together tens of thousands of employees.

The Bureau of Labor Statistics provides an overview of the types of meeting, convention and event planners:

- Association planners organize annual conferences and trade shows for professional associations.
- Corporate planners organize internal business meetings and meetings between businesses.
- Government meeting planners organize meetings for government officials and agencies.
- Convention service managers help organize major events, as employees of hotels and convention centers.
- Event planners arrange the details of a variety of events, including weddings and large parties.
- Non-profit event planners plan large events with the goal of raising donations for a charity or advocacy organization. Events may include banquets, charity races, and food drives.

Candidates with a bachelor’s degree in hospitality or tourism management should have the best job opportunities. A Certified Meeting Professional (CMP) credential is also viewed favorably by potential employers. Those who have experience with virtual meeting software and social media outlets also should have an advantage.

The median annual wage for meeting, convention, and event planners was \$45,810 in May 2012, according to the BLS, and employment for this career path is projected to grow 33 percent from 2012 to 2022, much faster than the average for all occupations. As businesses and organizations become increasingly international, meetings and conventions are expected to become even more important.

# 2014: The Economic Landscape for Recent College Graduates

A May 2014 *U.S. News and World Report* story depicts a relatively promising outlook for 2014 college graduates.

“The 1.6 million college seniors who will be graduating in the next few weeks are getting an exciting gift – more jobs. Overall, things are looking up. The Bureau of Labor Statistics announced Friday that businesses added the most jobs in more than two years during April, and the unemployment rate dropped to the lowest it’s been since 2008,” according to *U.S. News*. “Many agree this is the most promising employment outlook for new college grads in several years.”

Still, the aftermath of the global recession of 2009 is having a profound effect on the job market, according to a 2014 report, “The Class of 2014: The Weak Economy Is Idling Too Many Young Graduates,” by the Economic Policy Institute.

“By attending and finishing college, young college graduates have made a significant down payment on their career in terms of both time and money, and they typically have very high labor force participation,” according to the Economic Policy Institute report. “And because a college degree affords more opportunities in the labor market—not least of which is the fact that college graduates are often more competitive relative to non-college graduates when it comes to landing jobs not requiring a college degree—unemployment among young workers with a college degree is substantially lower than among other young workers. However, young college graduates’ job prospects have deteriorated dramatically since the start of the Great Recession.”

In this report, UC San Diego researchers have provided recent college graduates with some specific career paths where job growth and opportunities are promising. Our goal is to analyze the job market, with a focus on the impact of globalization, economic trends, and business growth patterns, in order to realistically predict areas where new graduates can leverage or build upon their skills to enter the workforce.



## Research Team

Henry DeVries, MBA is an author, educator, and director of outreach and engagement strategies at UC San Diego Extension, the continuing education arm of the university. The co-author of five career books, including *Closing America's Job Gap* and *Self-Marketing Secrets*, he speaks to thousands of business people each year on how to advance their careers and attract clients. DeVries earned his bachelor's degree at UC San Diego, his MBA from San Diego State University, and completed specialized training at the Harvard Business School. He writes and speaks on how to market your company, cause or career.

Dr. Sundari Baru is a research economist at UC San Diego Extension. She is currently working on an National Science Foundation-funded project on the dynamics of regional innovation. She was previously the research director at the Center on Policy Initiatives, a think tank based in San Diego, where she co-authored several research reports on the San Diego economy. Dr. Baru holds an M.A. and Ph.D. in economics from the University of Michigan, Ann Arbor.

Dr. Josh Shapiro is the director of research and evaluation at UC San Diego Extension and a current member of the team working under a grant from the National Science Foundation on the role that social and cultural dynamics play in regional innovation. He also leads Extension's market research team, which focuses on assisting educational programs, conducting market research, and developing curricula. Among his prior work, Shapiro was one of the core evaluators on the effectiveness of the Department of Labor's \$500 million WIRED initiative, which involved fifteen regions across the United States. Shapiro holds a Ph.D. and M.A. in sociology from UC San Diego and a B.A. in social thought and analysis from Washington University in St. Louis.

## End notes

From “How Bad Is the Job Market for College Grads? Your Definitive Guide,” by Jordan Weissmann, April 2013, The Atlantic Magazine.  
[www.theatlantic.com/business/archive/2013/04/how-bad-is-the-job-market-for-college-grads-your-definitive-guide/274580/](http://www.theatlantic.com/business/archive/2013/04/how-bad-is-the-job-market-for-college-grads-your-definitive-guide/274580/). Accessed May 2013.

Economic News Release: “Employment Situation Summary April 2013” Bureau of Labor Statistics  
[www.bls.gov/news.release/empstat.nr0.htm](http://www.bls.gov/news.release/empstat.nr0.htm). Accessed May 2013.

From “It’s Time to Change Your Job-Search Strategy If...” by Susan Ricker, November 2012, CareerBuilder.com,  
[www.careerbuilder.com/Article/CB-3242-Job-Search-Strategies-Its-time-to-change-your-job-search-strategy-if/](http://www.careerbuilder.com/Article/CB-3242-Job-Search-Strategies-Its-time-to-change-your-job-search-strategy-if/) Accessed May 2013.