



Imagine
America
Foundation

Filling America's Skilled Worker Shortage:

The Role of Career Colleges

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I. Purpose and Overview

The purpose of this study is to evaluate the contribution of private and career colleges in the training of skilled workers for high-demand occupations. The United States' economy depends on its higher education system to produce qualified graduates to fill openings created by economic growth and other factors such as promotion and retirement, many of which require a college education. The higher education system in the United States is uniquely structured with a mix of publicly funded community colleges and universities; private non-profit colleges and universities; and privately funded career colleges. These institutions provide a range of choices for students to acquire the knowledge and skills they need to enter and advance in their chosen careers and professions.

The U.S. Skilled Worker Shortage

In many critical professions, there is a shortage of skilled workers in the U.S. which, if left unchecked, will constrain long-term economic growth. U.S. Secretary of Labor Elaine Chao recently acknowledged this critical issue:

“Like any other nation, America faces many challenges and opportunities. And one of the challenges is the skills gap. That’s the mismatch between the skills of some in our workforce and the skills needed for jobs in growing sectors of our nation’s economy.

In the next decade, nearly two-thirds of the estimated 15.6 million net new jobs created in the U.S. will be in occupations that require some postsecondary education or considerable on-the-job training. Our country, for example, will need to fill job openings for nearly three million healthcare professionals. We will need over 950,000 engineers, including aerospace, biomedical, civil, computer software, and environmental engineers. We will also need workers in other high-growth industries including nano-technology, geospatial technology, and the life sciences, to name a few.

By definition, these jobs pay above-average wages because employers are paying a premium for workers with skills that are in demand. But workers need postsecondary education to access these opportunities.”

Career colleges in the U.S. play an important role in preparing students to fill these needed positions.

U.S. Career Colleges

Career colleges are closely attuned to the needs of the labor market. They work closely with employers, through formal advisory boards and other informal mechanisms, to ensure that the education they provide is in line with local and national workforce needs. Their private capital funding model allows them to be nimble in their decisions to invest in new programs providing needed access to the kinds of postsecondary education that will help decrease these skilled worker shortages.



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There are currently 2,847 career college campuses operating in the United States offering a variety of academic programs designed to prepare students for high-impact careers in vital economic sectors, including healthcare, business, and information technology. During the 2005-2006 academic year, more than 500,000 students completed an academic program at a career college.

Many of these programs are designed to prepare students for careers which are imperative for the ongoing operations of important segments of our economy. Career college graduates often find employment in roles supporting professionals such as lawyers, doctors, and business leaders. They ensure that medical tests are performed correctly, conduct critical legal research, and keep computer networks operational. While many of these professionals work in the background, their places of employment could not function without them. Without the training that career colleges provide, employers would struggle to find or train employees to fill their needs.

Career colleges play a critical role in the supply of skilled workers by not only training students for entry-level positions, but by also providing ongoing education to support career advancement, management training, and retraining for new professions and occupations. Students earning master's degrees in business, education, IT, and computer sciences have gained the educational credentials to help them advance in their careers to leadership positions.

The following tables outline the most popular programs at career colleges by degree level. Although the majority of career college completions are at the associate level, there is an increasing number of students who complete bachelor's and master's programs, as more career colleges have begun programs at these degree levels over the last several years, a trend that is continuing.

Bachelor's Degrees: Top 10 Disciplines by Number of Completions	
Business, Management, Marketing, and Related Support Services	22,652
Computer and Information Sciences and Support Services	9,817
Visual and Performing Arts	7,305
Security and Protective Services	2,306
Health Professions and Related Clinical Sciences	2,103
All other	3,873
Total	48,056

Associate's Degrees: Top 10 Disciplines by Number of Completions	
Health Professions and Related Clinical Sciences	25,646
Business, Management, Marketing, and Related Support Services	23,622
Computer and Information Sciences and Support Services	14,090
Visual and Performing Arts	10,859
Personal and Culinary Services	9,662
All other	24,108
Total	107,987



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The visual and performing arts academic discipline at first seems an unlikely field for career college programs. Within this discipline, however, are programs in cinematography and video editing for our entertainment; programs in interior design that make our homes and offices more attractive; and programs in graphic art and in commercial and advertising art that increase the impact of communications.

This report focuses on the top professions and occupations that, according to the Bureau of Labor Statistics, require some college training. For the purposes of this report, we have defined an occupation or profession as requiring some college if more than half the workers currently employed in the occupation have some college education. In our analysis, we mapped the number of people completing a course of education at a career college in the 2005-2006 academic year to the number of annual job opening in the specific occupation or profession for which the academic course prepared the student. The results of the mapping are described in the summary and the main body of this report.



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II. Executive Summary

Private career colleges make a vital and important contribution to the American economy in many ways. Economists suggest that human capital is becoming increasingly important as the basis for growth in an economy that is dominated by service- and information-related occupations. The mission of most career colleges – to help prepare students for entry into or advancement in their chosen careers – directly increases America's stock of human capital. Career colleges have a more important role than just increasing the amount of human capital available. Career colleges select the programs they offer because they know that their graduates will find employment in the occupations they have prepared for.

In the latest reported year, more than 500,000 students completed programs at career colleges. The top fields of study (fields of study with more than 1,000 completions reported) were:

Classification of Instructional Program	Total Completions
Health Professions and Related Clinical Sciences	189,667
Personal and Culinary Services	84,607
Business, Management, Marketing, and Related Support Services.	69,791
Mechanic and Repair Technologies/Technicians	37,037
Computer and Information Sciences and Support Services	32,284
Visual and Performing Arts	22,461
Engineering Technologies/Technicians	17,163
Education	13,852
Security and Protective Services	9,005
Legal Professions and Studies	8,331
Transportation and Materials Moving	6,556
Construction Trades	4,958
Communications Technologies/Technicians and Support Services	3,859
Psychology	2,114
Precision Production	1,665
Communication, Journalism, and Related Programs	1,334
Public Administration and Social Service Professions	1,014
Family and Consumer Sciences/Human Sciences	1,004

This report focuses on occupations for which there is close program alignment with occupations in the health professions, business management, computer and information systems, education, communications technologies, and legal profession and studies. There are projected to be nearly 650,000 openings annually in the 33 occupations we highlight. Career Colleges report that nearly 140,000 students completed education programs related to these occupations. Career college students could fill 22% of the openings in these occupations.



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Occupations in the health services area, where career college graduates could fill 5% or more of the annual openings, include:

- Nursing
- Dental hygiene
- Surgical technicians
- Radiological technologists
- Medical clinical laboratory technicians
- Medical and health services managers
- Respiratory therapists
- Cardiovascular technologists
- Veterinarian technicians
- Physical therapist assistants and aides
- Health information support workers
- Emergency medical technicians
- Pharmacy aides and technicians

In business management, highlighted occupations include:

- Human resources analysts
- Accountants and auditors
- Business analysts
- Marketing analysts

In the computer and information systems and communications area, highlighted occupations include:

- Network and computer systems administration
- Network systems and data communications analysts
- Computer and information systems managers
 - Graphic designers
 - Multimedia artists and animators
 - Database administrators
 - Broadcast technicians and equipment operators
 - Broadcast announcers, news analysts, and reporters

Other occupations highlighted include:

- Paralegals
- Elementary school teachers
- Instructional coordinators
- Education administrators
- Cooks and chefs



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While this report focuses on the occupations for which America's career colleges are making a major contribution to the need for educated and skilled workers, their influence in our economy is even broader. For hundreds of occupations, there are multiple paths of entry or even multiple entry requirements. An occupation that requires on-the-job training, for example, might also require some postsecondary education.

Employers often prefer to hire individuals with at least some college education so that they can avoid some of the cost of basic training for such workers. Although these occupations are not highlighted in this report, the dynamic forces are in place to increase the value of the education provided by career colleges to the U.S. economy and to help solve the shortage of skilled workers.

IMAGINE AMERICA FOUNDATION

The Imagine America Foundation (IAF), established in 1982, is a not-for-profit organization dedicated to providing scholarship, research and training support for the career college sector. IAF sponsors many scholarship and award programs, including: *Imagine America*, for graduating high school students; *Imagine America Promise*, for continuing career college students; *Imagine America Military Award Program* and the *LDRSHIP Award*, for active duty, reservist, or honorably discharged U.S. military personnel; and *Imagine America ASEP* (Adult Skills Education Program), for adult learners.

To date, through *Imagine America*®, the Foundation has secured awards and scholarships for over 37,000 students enrolling at career colleges nationwide.

IAF also publishes vital research publications for the higher education sector, including: *Fact Book: A Profile of Career Colleges & Universities*; *Economic Impact of America's Career Colleges*; *In Service to America: Celebrating 165 Years of Career & Professional Education*; *Imagine America's Guide to Career Colleges*; and *Imagine America Student's Guide*.

The Foundation also honors achievement in career education and offers faculty development training through its Center for Excellence in Education. For more information about the Imagine America Foundation and its programs, please visit www.imagine-america.org.

