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## ABSTRACT

Many higher education institutions serve students enrolled in specialized training courses who receive undergraduate certificates rather than degrees. In academic year 1991-92, almost 65,000 postsecondary students earned certificates for programs of less than 1 year, and nearly 117,000 completed requirements for programs lasting between 1 and 2 years. Based on the National Center for Education Statistics survey of earned degrees and the Bureau of Labor Statistics (BLS) labor force projections for 1992-2005, programs of less than 1 year duration showed the following characteristics: 53% of the students were women and about 1 in 5 was an ethnic minority; 7 in 10 students received their certificates at community colleges; certificate programs were offered at 624 institutions; among men, the three most popular programs were commercial vehicle operator (14%), emergency medical technology (10%), and law enforcement (6%); and among women, the three most popular programs were nurse assistant (19%), administrative assistance (5%), and emergency medical technology (4%). For programs lasting between 1 to 2 years, about 61% of students were women and 1 in 4 students were ethnic minorities; two-thirds of students completed their certificates at public two-year institutions; programs were offered at 1,350 institutions; and mechanical trades were chosen most often by men, while the most common program for women (19%) was licensed practical nursing. BLS projections are favorable for occupations open to certificate programs. (MAB)

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# Undergraduate Certificate Programs of Less than Two Years: 1991-92. Research Briefs, Volume 6, Number 1, 1995.

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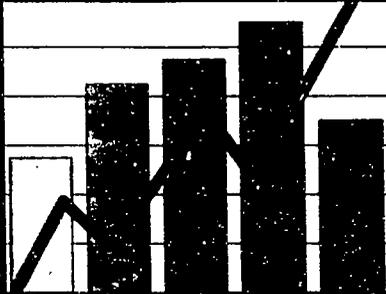
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# Research Briefs

## Undergraduate Certificate Programs of Less than Two Years: 1991-92

CATHY HENDERSON

**W**hen most people think about undergraduates, they envision students who are working toward an associate or bachelor's degree. However, higher education institutions also serve students enrolled in specialized training courses who receive undergraduate certificates rather than degrees. In academic year 1991-92, almost 65,000 postsecondary students earned certificates for programs

of less than one year, and nearly 117,000 completed their requirements for programs lasting between one and two years.

Who are these students? Where do they receive their training? What fields of study have they chosen? What are the labor force projections for their occupations? How will changes in the labor force affect their ability to compete in the future? This brief profiles students who complete

undergraduate certificate programs of less than two years.

Two primary sources of data were used for this analysis: the 1991-92 National Center for Education Statistics (NCES) survey of earned degrees and the Bureau of Labor Statistics (BLS) projections of labor force changes for the period 1992-2005. The NCES annual survey of earned degrees describes students receiving awards and certificates.<sup>1</sup> In addition to forecasts of general trends in labor force participation rates, BLS also analyzes the employment outlook for selected occupations by type of work performed, level of education expected for entry, and median weekly earnings anticipated.

### HIGHLIGHTS

- ◆ Approximately 182,000 students earned undergraduate certificates at postsecondary institutions in 1991-92; some of these programs could be completed in less than a year, while others required between one and two years of study.
- ◆ Seven in 10 students received their certificates at community colleges.
- ◆ The most popular certificate programs completed by men were divided among various vocational fields, while the health sciences clearly ranked first among women.
- ◆ The majority of these students were women (58 percent), and almost one in four (23 percent) was an individual of color.
- ◆ Labor force projections through the year 2005 are generally favorable for occupations open to certificate holders. Typically, these are jobs that pay higher than average earnings and do not require college degrees. Students can successfully compete for these jobs if they have completed specialized training in certificate programs.

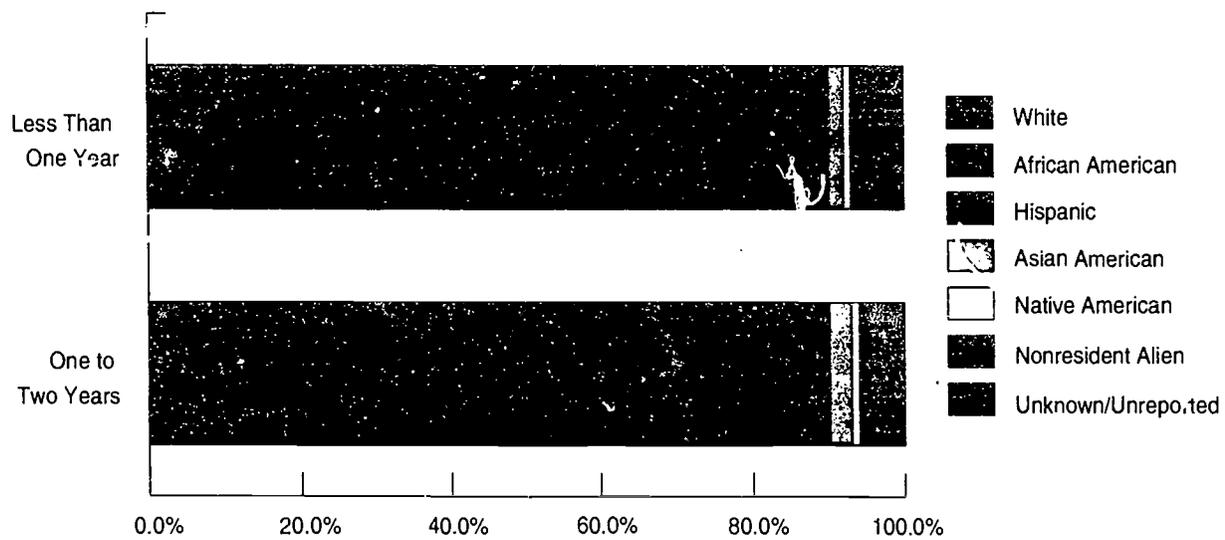
### Programs Lasting Less Than One Year

#### Demographic Characteristics

In academic year 1991-92, nearly 65,000 postsecondary students earned certificates in programs designed to be completed in fewer than 12 months.

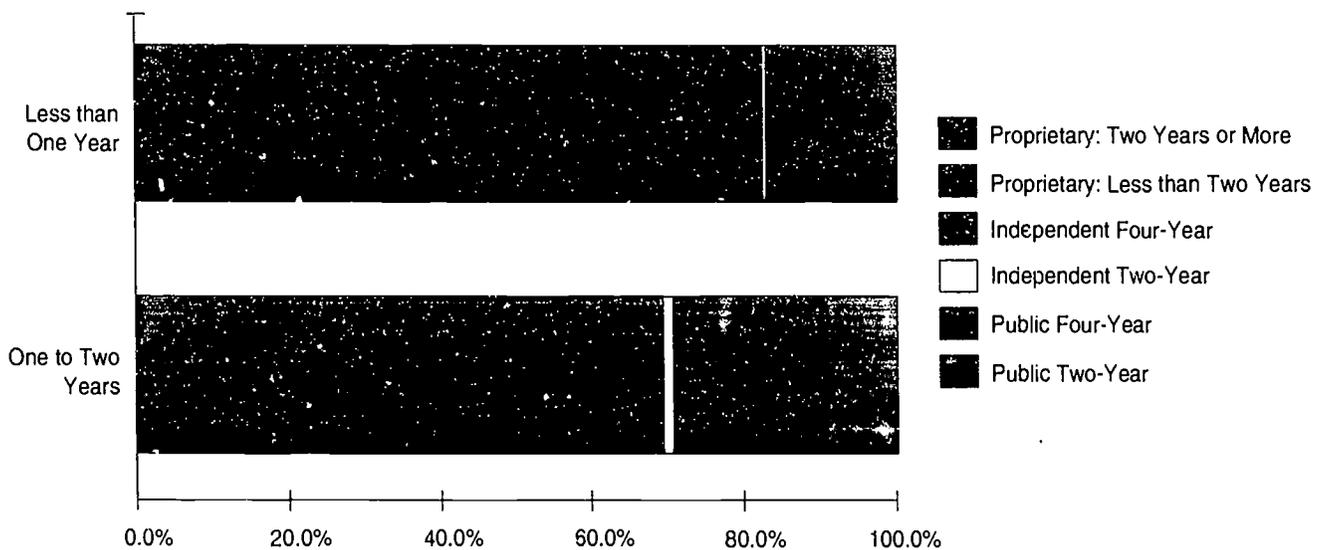
- ◆ Slightly over half the recipients were women (53 percent).

Figure 1  
**Race/Ethnicity of Students Completing Undergraduate  
 Certificates, by Length of Program: 1991-92**



SOURCE: U.S. Department of Education NCES unpublished data, 1994.

Figure 2  
**Undergraduate Certificates Awarded, by Type of Institution: 1991-92**



SOURCE: U.S. Department of Education NCES unpublished data, 1994.

- ◆ About one in five students was an individual of color, either African American (13 percent), Hispanic (5 percent), Asian American (3 percent), or Native American (1 percent). Another 1 percent were nonresident aliens. The race/ethnicity of 6 percent of the recipients was unknown or unreported (Figure 1).

### Institutional Affiliation and Geographic Distribution

- ◆ The majority of these students (three in four) received their certificates from public two-year colleges (Figure 2).
- ◆ In 1991-92, certificate programs of less than one year were offered at 624 institutions across the United States. However, students were concentrated in a few states: Florida, Illinois, California, Wisconsin, and

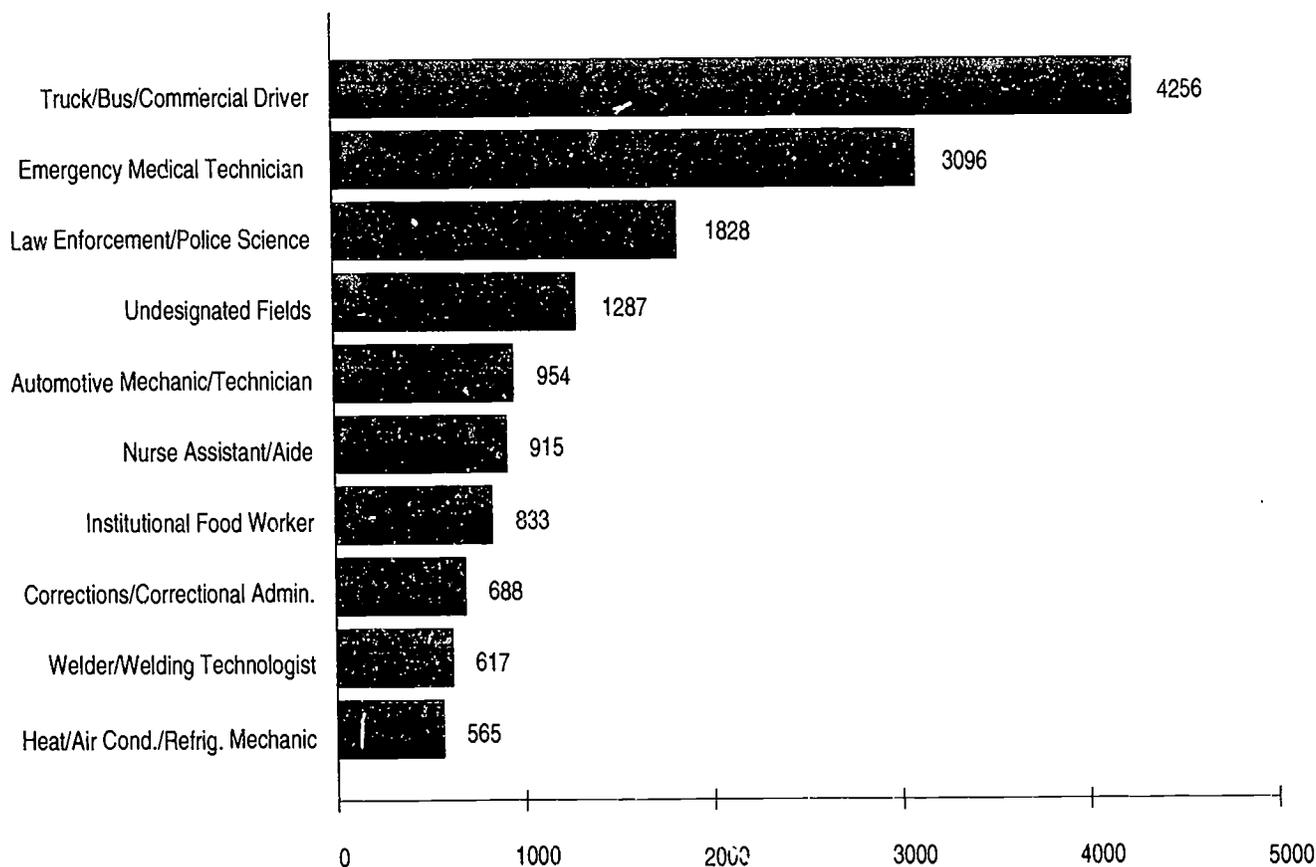
North Carolina educated about half of all students receiving certificates requiring less than one year of study. Almost two in three students were enrolled in a total of 10 states.

### Programs of Study

Generally, students chose programs that provided training designed to lead directly to specific occupations.

- ◆ Among men, the three most popular programs were truck/bus and other commercial vehicle operator (14 percent); emergency medical technologist/technician (10 percent); and law enforcement/police science (6 percent) (Figure 3).
- ◆ Nurse assistants/aides attracted more women than any other occupation. Almost one in five (19 percent) women had selected this program. The second and

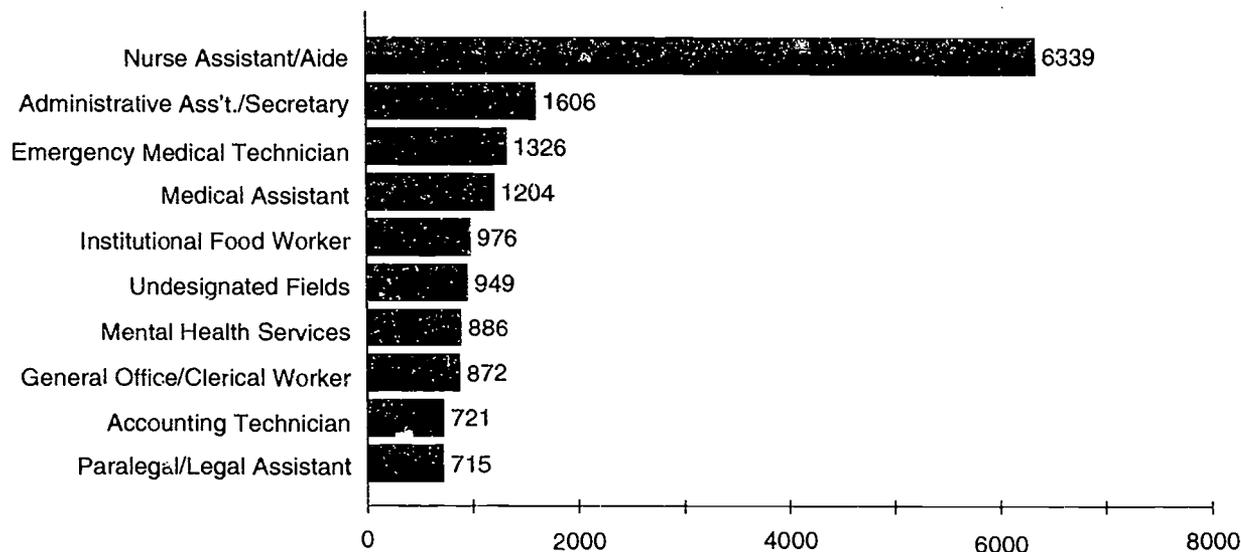
Figure 3  
Most Popular Certificate Programs of Less Than One Year for Men: 1991-92



NOTE: These 10 most popular programs comprise 49 percent of the 30,619 certificates of less than one year completed by men in 1991-92.  
SOURCE: U.S. Department of Education NCES unpublished data, 1994.

Figure 4

**Most Popular Certificate Programs of Less Than One Year for Women: 1991-92**



**NOTE:** These 10 most popular programs comprise 46 percent of the 34,160 certificates of less than one year completed by women in 1991-92.

**SOURCE:** U.S. Department of Education NCES unpublished data, 1994.

third most popular choices among women were administrative assistant/secretarial science (5 percent) and emergency medical technologist/technician programs (4 percent) (Figure 4).

**Programs Lasting More Than One But Less Than Two Years**

**Demographic Characteristics**

In 1991-92, almost 117,000 students completed certificate programs that lasted between 12 and 24 months.

- ◆ About three-fifths (61 percent) were women.
- ◆ Almost one in four was an individual of color, either African American (12 percent), Hispanic (8 percent), Asian American (3 percent), or Native American (1 percent). One percent were nonresident aliens. The race/ethnicity status of 5 percent of the recipients was unknown or unreported.

**Institutional Affiliation and Geographic Distribution**

- ◆ As with the shorter training programs, certificate programs lasting between 12 and 24 months were offered

most often at community colleges. Indeed, two in three students had completed their certificates at public two-year colleges.

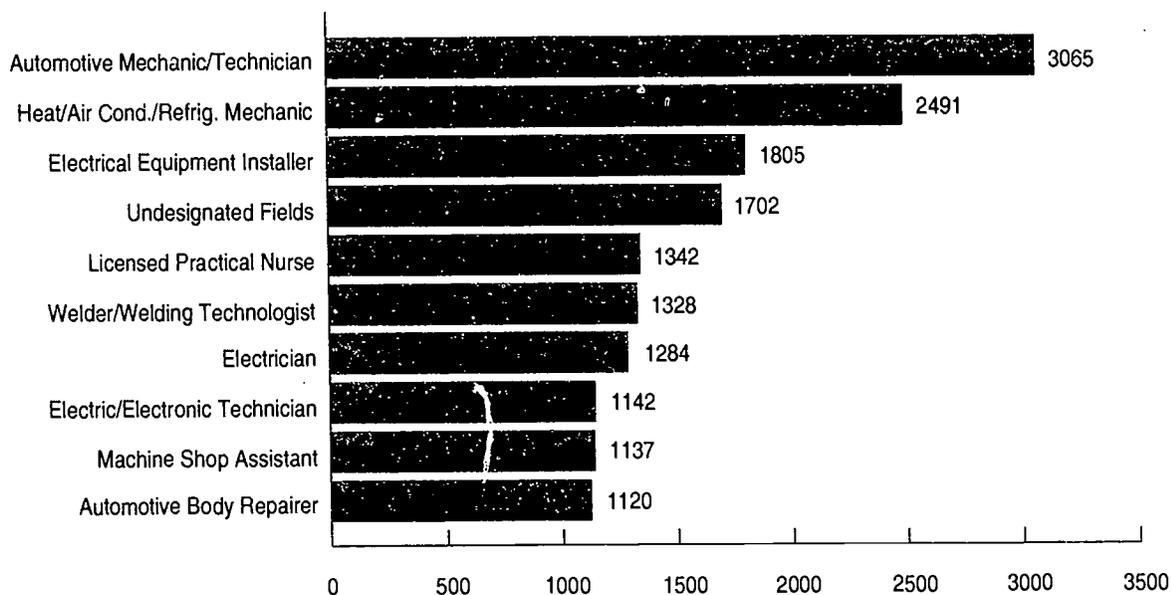
- ◆ Certificate programs lasting 12 to 24 months were offered at 1,350 postsecondary institutions. However, enrollment was concentrated in a handful of states. Almost half the certificates were awarded in five states: Pennsylvania, California, Texas, Illinois, and Georgia.

**Programs of Study**

- ◆ Mechanical trades were chosen most often by men. The top three specific occupations were automotive mechanic/technician (7 percent); heating, air conditioning, and refrigeration mechanic and repairer (5 percent); and electrical and electronics equipment installer and repairer (4 percent) (Figure 5).
- ◆ By contrast, almost one in five women (19 percent) selected a single occupation: licensed practical nursing. The second and third choices among women were training to become administrative assistant/secretarial science employees (7 percent) and cosmetologists (5 percent) (Figure 6).

Figure 5

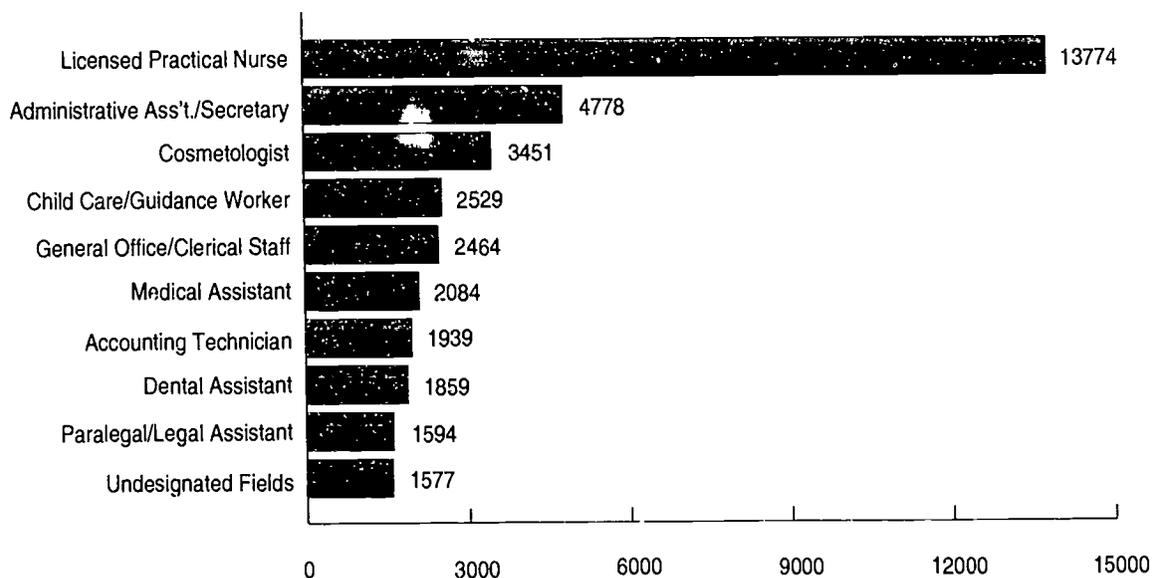
**Most Popular Certificate Programs of One to Two Years for Men: 1991-92**



**NOTE:** These 10 most popular programs comprise 36 percent of the 45,962 certificates of one to two years completed by men in 1991-92.  
**SOURCE:** U.S. Department of Education NCES unpublished data, 1994.

Figure 6

**Most Popular Certificate Programs of One to Two Years for Women: 1991-92**



**NOTE:** These 10 most popular programs comprise 51 percent of the 70,911 certificate programs of one to two years completed by women in 1991-92.  
**SOURCE:** U.S. Department of Education NCES unpublished data, 1994.

## Labor Force Projections

### General Changes in the Characteristics of Workers

Analysts at BLS project that recent trends in the pool of available civilian labor force participants are likely to continue through the year 2005. The following assumptions are based on the BLS set of moderate projections:<sup>2</sup>

- ◆ Women are likely to gain in their share of the labor force. In 1979, one in two adult women (51 percent) was working; by 2005, that ratio is expected to increase to more than three in five (63 percent) (BLS, 1994a). Comparable percentages for men are projected to remain more stable, falling slightly from the 1979 figure of 78 percent to an expected level of 75 percent by 2005.
- ◆ BLS projects that individuals of color will constitute an increasing proportion of the civilian labor force. In 1992, their share was 22 percent; this is projected to grow to 27 percent by 2005 (BLS, 1993).
- ◆ If present trends continue, the average age of persons working in the labor force will rise. In 1979, the median age of workers was 35; this is likely to increase to

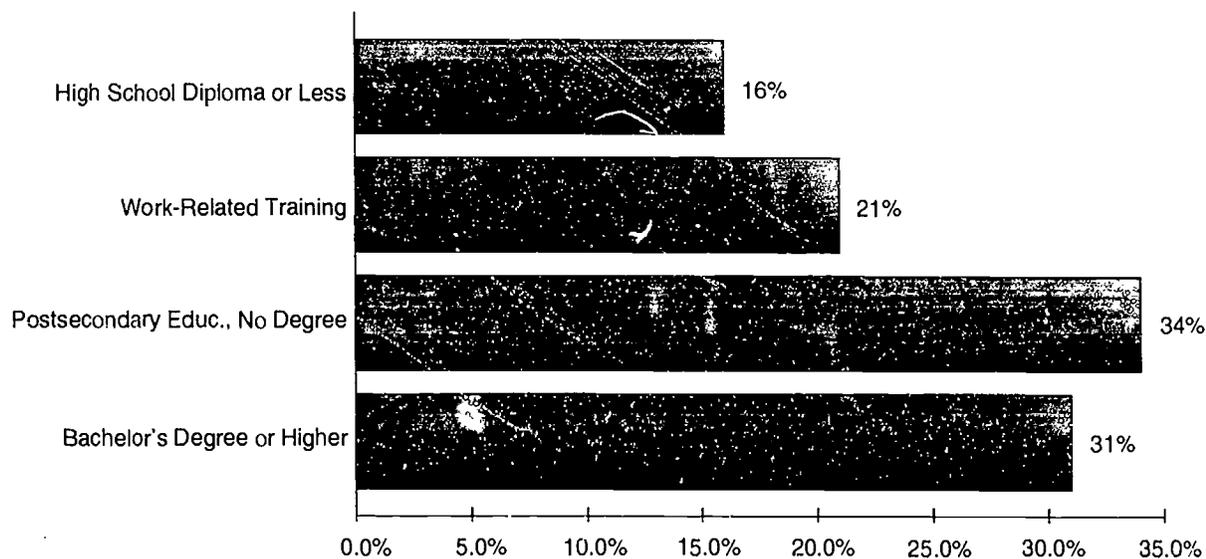
40 years of age by 2005 (BLS, 1994a). Consequently, workers in 2005 will face more retraining and adaptation to technology if they want to retain their positions or advance in their careers.

- ◆ It is anticipated that the number of college graduates in the U.S. population will continue to increase at a steady rate. Between 1970 and 1991, the number of college graduates in the adult population almost tripled, from 12 to 34 million people (NUCEA, 1994). Unless an unusually high number of positions for well-educated workers are created in the near future, it is likely that there will be both 1) accelerated competition among college graduates for positions that traditionally have required a bachelor's degree as an entry requirement, and 2) higher competition for some positions that historically have required fewer years of postsecondary education as a prerequisite.

### Growth in Jobs

BLS projects that almost 26.4 million new jobs will be available during the period 1992–2005. The majority of this employment growth will occur in occupations that pay higher than average wages. In addition, positions in which the workers typically have one to three years of college will experience the largest percentage growth (Figure 7). For

Figure 7  
Projected Percentage Change in Employment Growth,  
by Level of Education of the Worker: 1992–2005



NOTE: Level of education means the entry level generally needed to be hired.

SOURCE: Bureau of Labor Statistics, *Occupational Outlook Quarterly*, No. 1, Spring 1994, p. 52.

Table 1  
**Projected Growth in Major Occupations,  
the Educational Attainment of Workers,  
and the Median Weekly Earnings in Selected Occupations**

Projected Growth (1992-2005)	Educational Attainment (1992) Percent Distribution				Median Weekly Earnings (1992)
	Expected Percentage Growth	High School or Less	One to Three Years of College	Four or More Years of College	
Executives, administrators, and managers	26	25	27	48	\$652
Professional specialty workers	37	9	19	72	\$596
Technicians and related support workers	32	26	45	29	\$489
Marketing and sales workers	21	46	32	22	\$346
Administrative support workers, including clerical	14	50	37	13	\$341
Service workers	33	68	26	6	\$232
Agriculture, forestry, fishing, and related workers	4	75	17	8	\$258
Precision production, craft, and repair workers	13	68	26	6	\$470
Operators, fabricators, and laborers	10	80	17	3	\$331
<b>Total</b>	<b>22</b>	<b>50</b>	<b>27</b>	<b>23</b>	<b>\$406</b>

SOURCE: Bureau of Labor Statistics, *Occupational Outlook Quarterly*, Fall 1993, p. 36.

example, jobs with both 1) higher than average earnings, and 2) entry requirements of some postsecondary training but less than a bachelor's degree are expected to grow by nearly 2.8 million positions. These are the very jobs that postsecondary students who complete one- or two-year training programs might be able to secure.

### **Implications for Students Earning Certificates**

Most students who have enrolled in postsecondary certificate programs have chosen to be trained for specific occupations. Have these fields of study been good choices? What are the projections for these occupations in the future?

The data in Table 1 illustrate three factors that affect the outlook for broad categories of jobs. The first pertains to the expected percentage growth in the available jobs by major occupations. The next factor shows the level of education that most workers in certain occupations have attained. The third factor is median weekly earnings.

- ◆ Overall, the number of jobs is expected to increase by 22 percent between 1992 and 2005.
- ◆ In general, about half of U.S. workers have high school diplomas as their highest degree credential, another 27 percent have completed some college, and the remaining 23 percent are college graduates.
- ◆ The 1992 median weekly earnings for all occupations was \$406.
- ◆ Data from the BLS projections in Table 1 show that programs that train technicians and related support workers may be good choices for the following reasons: First, the projected percentage growth in positions is higher than average (32 percent vs. 22 percent), and second, the median weekly earnings exceed the overall median (\$489 vs. \$406).
- ◆ Several other major occupational groups in Table 1 might seem attractive to workers who are not college graduates but who seek career advancement. Jobs for service workers are projected to expand by 33 percent, but median weekly earnings are the lowest of all fields (\$232). Likewise, although many people are working as administrative support/clerical employees, this field is not expected to grow rapidly (14 percent), nor is it typically lucrative (averaging \$341 per week). Students seeking postsecondary training in marketing and sales should be aware that the median weekly earnings in these positions are lower than average (\$346).

◆ Eight of the 10 most popular one- to two-year certificate programs for men were in precision production, craft, and repair. Some of these certificate recipients may have difficulty finding work in these fields, however, because the expected growth rate is low (13 percent). But if work can be found, the median weekly earnings are good (\$470).

◆ Another problem with some occupations may be competition from employees who have learned their skills through on-the-job apprenticeship programs but who have not completed postsecondary certificates. For example, BLS reports that, in 1992, two-thirds (68 percent) of precision production, craft, and repair workers were high school graduates who probably want to remain in a higher-than-average earnings field once they have served their apprenticeship and learned their craft. Therefore, unless the pace of technological change accelerates sharply, new graduates with certificates in precision production, craft, and repair will face tough competition for existing openings.

Table 1 summarizes the general types of occupations available to students who are considering postsecondary education training programs. Table 2 provides specific BLS labor force projections for each of the top five programs selected by students earning certificates in 1991-92. These employment growth forecasts are based on national labor force trends and can be of general use to prospective students as they investigate the market for specific occupations.

However, local and regional projections are far more important to people seeking employment. Most postsecondary students who enroll in certificate programs attend community colleges near their homes. The particular courses offered at these sites have been developed not only based on state and regional projected labor force needs but also as a result of demands of the local economy. For example, the opening of a large facility for senior citizens in a rural area may encourage a local community college to expand its course offerings in licensed practical nursing or in institutional food preparation and management.

### **Potential for Advancement**

- ◆ What opportunities exist for advancement? In addition to becoming more skilled through on-the-job experience, students who have earned certificates may want to further their education.
- ◆ For students who have completed certificate programs in specialized fields, the labor market outlook is encouraging. Their level of academic preparation is

Table 2  
**Top Five Programs, by Length of Program and Gender of Recipient  
 and Employment Growth Prospects, by Occupation**

**Top Five Programs Chosen  
 and Percentage of Certificates  
 Awarded in Academic Year 1991–92**

**Employment Growth Prospects  
 (1992–2005)**

**Programs of Less Than One Year: Men**

Truck/Bus/Commercial Vehicle Operator (14%)	Average
Emergency Medical Technologist/Technician (10%)	Faster than average; high turnover
Law Enforcement/Police Science (6%)	Slower than average; keen competition
Automotive Mechanic/Technician (3%)	Average
Nurse Assistant/Aide (3%)	Much faster than average; high turnover

**Programs of Less Than One Year: Women**

Nurse Assistant/Aide (19%)	Much faster than average; high turnover
Administrative Assistant/Secretarial Science (5%)	Slower than average
Emergency Medical Technologist/Technician (4%)	Faster than average; high turnover
Medical Assistant (4%)	Much faster than average; high turnover
Institutional Food Workers and Administrators (3%)	Faster than average; high turnover

**Programs of One to Two Years: Men**

Automotive Mechanic/Technician (7%)	Average
Heating, Air Conditioning, and Refrigeration Mechanic and Repairer (5%)	Faster than average
Electrical and Electronics Equipment Installer and Repairer (4%)	Decline
Licensed Practical Nurse (3%)	Faster than average
Welder/Welding Technologist (3%)	Slower than average

**Programs of One to Two Years: Women**

Licensed Practical Nurse (19%)	Faster than average
Administrative Assistant/Secretarial Science (7%)	Slower than average
Cosmetologist (5%)	Faster than average
Child Care and Guidance Workers/Managers (4%)	Much faster than average
General Office/Clerical and Typing Services (3%)	Average; high turnover

**NOTE:** Employment prospects: much faster than average (up 41% or more); faster than average (up 27–40%); average (up 14–26%); slower than average (up 0–13%); decline (down 1% or more).

**SOURCE:** American Council on Education Division of Policy Analysis and Research, based on National Center for Education Statistics annual earned degree surveys, unpublished data, 1994; and Bureau of Labor Statistics, *Occupational Outlook Quarterly*, Spring 1994.

similar to the largest group of workers in that field: seven in 10 technical workers have either a high school diploma or one to three years of college (BLS, 1993).

- ▶ Students can expand their career potential by taking additional technical classes or by choosing business courses to prepare them for managerial positions. Typically, courses taken as part of a certificate program can be applied to other degree programs at the same college or at a similar institution.

In a 1991 study conducted at Rancho Santiago College in California, certificate recipients were interviewed one year after receiving their certificates. More than half (55 percent) were enrolled in further postsecondary education at a local two- or four-year college. When these students were asked to comment on their previous certificate programs, two in three (68 percent) reported that they felt well-prepared for their additional college classes (Pham, 1991).

### Conclusion

Postsecondary educational programs of less than two years that lead to certificates offer the opportunity for career preparation and personal enrichment. Certificate programs have become more popular in the last few decades as a response to demands by industry and consumers for concentrated, career-related studies. Reasons for enrolling are varied; some students may be preparing for new careers, while others are acquiring new skills to stay current in their field or to qualify for a promotion.

Students choosing programs leading to specialized training are more likely to secure employment and to be better paid in their jobs than their peers who choose broad administrative programs. Workers who continue to gain knowledge through additional training or supplementary educational courses also are more likely to be promoted or to be able to change careers if necessary. The labor force in the next 10 years will be more diverse than it is today, with increasing proportions of women, individuals of color, older workers, and college graduates competing for jobs. Programs leading to undergraduate certificates can enable recipients who enroll in limited postsecondary courses to compete for technical occupations that offer higher than average pay.

### Endnotes

<sup>1</sup> Data on certain types of certificate programs have been collected by NCES since 1975. However, because there

have been changes in the classification of the instructional programs over the years, reliable trend analysis is difficult. Therefore, data from the 1991-92 earned degrees survey are the focus of this report. It is important to note that the number of students completing certificate programs of less than one year almost doubled in fewer than 10 years, from about 33,000 graduates in 1983-84 to almost 65,000 by 1991-92. By contrast, since 1985-87 (the first year NCES collected these data), the number of students in one- to two-year programs has averaged around 111,000, fluctuating by only about 10,000 students from year to year.

<sup>2</sup> The BLS projects economic trends through the year 2005 based on low, moderate, and high growth rates. The moderate projections used in this report are based on BLS assumptions that the economy will show general improvement. This includes a reduction in the federal budget deficit, improvement in the world trading position of the United States, and steady employment growth. Specific moderate growth projections include the following average annual percentage changes: real gross domestic product (2.2 percent); defense spending (1.9 percent); nondefense spending (1.4 percent); civilian labor force (1.3 percent); durable goods (2.7 percent); nondurable goods (1.5 percent); and services (2.4 percent). The unemployment rate is projected to average 5.5 percent (BLS, 1994a).

### Resources

1. The National Center for Education Statistics (NCES) collects information on degrees conferred by academic level, race/ethnicity, gender, and major field of study through its Integrated Postsecondary Education Data System (IPEDS) *Completions* and *Consolidated* surveys. Prior to 1985-86, these data were collected as part of the Higher Education General Information Survey (HEGIS), *Degrees and Other Formal Awards Conferred*. Data may be obtained on magnetic tape or on diskette from NCES; for further information, contact Frank Morgan at (202) 219-1779.
2. The U.S. Department of Labor Bureau of Labor Statistics (BLS) biennially develops projections that include data on the labor force categorized by age, gender, and race/ethnicity, and changes in employment by occupation. These projections usually are published in a special issue of the *Monthly Labor Review*. For further information, contact the Bureau of Labor Statistics at (202) 606-5900.

3. The American Association of Community Colleges (AACC), a membership association located in Washington, DC, analyzes general information related to public two-year colleges. In addition, AACC collects special information on community college issues. For example, in the summer of 1994, data were collected on programs that were so successful that the graduates were being hired immediately upon graduation. For more information on the "Hot Programs Survey," contact Margaret Rivera at (202) 728-0200, ext. 234.

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