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Accountant / Auditor

PANHANDLE

Average Wage
\$27.51

*Average Annual
Job Openings*
50

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
1,485	1,702

TEXAS

Average Wage
\$27.13

*Average Annual
Job Openings*
3,182

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
83,730	99,744

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
1,055,000	1,261,000

Female 54%
Minority 19%

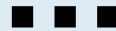
EMPLOYMENT CODES

OES 2114

O*NET 13-2011.01
Accountants & Auditors

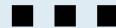
JOB DESCRIPTION

Prepare, analyze, and interpret accounting records for the purpose of giving advice or preparing statements. Installing or advising on systems of recording costs or other financial and budgetary data.



SKILLS AND APTITUDES NEEDED

- ◆ Aptitude for mathematics
- ◆ Competency with business systems and computers
- ◆ Ability to analyze, compare, and interpret facts and figures quickly
- ◆ Ability to clearly communicate work results
- ◆ Ability to work well with people
- ◆ Possess high standards of integrity



Accountants and auditors help to ensure that firms are run efficiently, public records kept accurately, and taxes paid properly and on time. They perform these vital functions by offering a wide array of business and accounting services to their clients, including public, management, and government accounting, and internal auditing.

The fundamental tasks of the occupation are preparing, analyzing, and verifying financial documents in order to provide information to clients. Public accountants perform a broad range of tasks for corporate, government, nonprofit or individual clients. Management accountants record and analyze the financial information of the companies for which they work, and may perform other tasks such as budgeting, cost accounting and asset management. Government accountants work in the public sector, assuring that revenues are received and expenditures made in accordance with laws and regulations. They may also serve as Internal Revenue agents or investigators and bank examiners. Internal auditors verify the accuracy of their organization's records and that internal controls are adequate to protect against fraud and waste.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford		✓	A.A.S. (Associate in Applied Science Degree), Accounting Major
Clarendon College Clarendon, Pampa		✓	A.A. (Associate in Arts Degree), Business Administration Major-Accounting
Frank Phillips College Borger, Perryton		✓	A.A.S. (Associate in Applied Science Degree), Accounting Major
		✓	Certificate of Completion (Accounting)
Wayland Baptist University Amarillo	✓		B.B.A. (Bachelor of Business Administration Degree), Accounting Major
		✓	B.A. (Bachelor of Arts Degree), Business Administration Major
		✓	B.S.O.E. (Bachelor of Science in Occupational Education Degree), Business Administration Major
West Texas A&M University Canyon	✓		B.B.A. (Bachelor of Business Administration Degree), Accounting Major
	✓		M.B.A. (Master of Business Administration Degree)
	✓		M.P.A. (Master of Professional Accounting Degree)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Preferred: Certified Public Accountant (CPA)

Optional: Certified Management Accountant (CMA)

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Accounting/Tax Preparation/Bookkeeping/Payroll	26%	State Government	8%
Self-employed/Unpaid Family Workers	9%	Oil and Gas Extraction	7%

FOR MORE INFORMATION

American Institute of Certified Public Accountants, 1211 Avenue of the Americas, New York, NY 10036, (212) 596-6200, <http://www.aicpa.org>

The Institute of Internal Auditors, 247 Maitland Ave., Altamonte Springs, FL 32701-4201, (407) 937-1100, <http://www.theiia.org>

Institute of Management Accountants, 10 Paragon Dr., Montvale, NJ 07645-1718, (800) 638-4427, <http://www.imanet.org>

For additional website sources, please refer to the Resource Index.

Accountant / Auditor

Aircraft Mechanic / Service Technician

PANHANDLE

Average Wage
\$20.04

*Average Annual
Job Openings*
4

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
100	116

TEXAS

Average Wage
\$23.05

*Average Annual
Job Openings*
633

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
14,190	17,172

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
131,000	145,000

Female 5%
Minority 28%

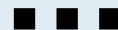
JOB DESCRIPTION

Repair and maintain operating condition of aircraft assemblies, such as hydraulic and pneumatic systems, landing gear, propellers, fuel tanks, and airframes. May also repair, replace and rebuild aircraft structures, functional components, and parts.



SKILLS AND APTITUDES NEEDED

- ◆ High degree of mechanical aptitude
- ◆ Knowledge in mathematics, physics, chemistry, electronics, computer science
- ◆ Able to clearly communicate work results
- ◆ Able to work well with people
- ◆ Agility for reaching and climbing
- ◆ Must not be afraid of heights



To keep aircraft in peak operating condition, aircraft mechanics perform scheduled maintenance, make repairs, and complete inspections required by the Federal Aviation Administration (FAA).

Mechanics usually work in hangars or in other indoor areas, although they may work outdoors, sometimes in unpleasant weather, when hangars are full, or when repairs must be made quickly.

Mechanics often work under time pressure to maintain flight schedules and have a tremendous responsibility to maintain safety standards. Frequently, mechanics must lift or pull objects weighing as much as 70 lbs. They must stand, lie, or kneel in awkward positions and occasionally must work in precarious positions on scaffolds or ladders. Noise and vibration are common when testing engines. Overtime work is frequent.

EMPLOYMENT CODES

OES 85323

*O*NET* 49-3011.00
*Aircraft Mechanics
and Service Technicians*

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S. (Associate in Applied Science Degree), Aviation Maintenance Technology
	√		Certificate of Completion (Airframe Mechanic, Powerplant Mechanic, or Aerospace Manufacturing)

LICENSE/CERTIFICATION

Preferred: A&P (Airframe and Powerplant Certification)

Optional: Powerplant Certification or Airframe Certification (Students can be licensed in either of the two certification areas)

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Federal Government	31%
Support Activities for Air Transport	30%
Aerospace Product & Parts Manufacturing	12%
Scheduled Air Transportation	8%
Machinery/Equipment/Wholesale Supplies	6%
Nonscheduled Air Transportation	4%
Support Activities for Crop Production	3%
Employment Services	2%

FOR MORE INFORMATION

Professional Aviation Maintenance Association, 717 Princess St., Alexandria, VA, 22314, (866) 865-7262, <http://www.pama.org>

U.S. Department of Transportation, Federal Aviation Administration, 800 Independence Avenue, SW, Washington DC, 20591, (866) 835-5322, http://www.faa.gov/licenses_certificates

For additional website sources, please refer to the Resource Index.

Aircraft Mechanic / Service Technician, FAA

Automotive Body Repairer

PANHANDLE

Average Wage
\$17.73

*Average Annual
Job Openings*
9

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
307	341

TEXAS

Average Wage
\$17.24

*Average Annual
Job Openings*
551

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
14,522	17,084

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
198,000	225,000

Female 2%
Minority 51%

EMPLOYMENT CODES

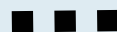
OES 85305

*O*NET 49-3021.00*

*Automotive Body
and Related Repairers*

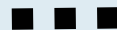
JOB DESCRIPTION

Repair, repaint, and refinish automotive vehicle bodies, straighten vehicle frames, and replace damaged vehicle glass. May examine damaged vehicles and estimate the cost of repair.



SKILLS AND APTITUDES NEEDED

- ◆ Basic mathematics and computer skills
- ◆ Ability to follow instructions and diagrams in technical manuals
- ◆ Detail-oriented and ability to make precise measurements



Automotive body repairers repair all types of vehicles mostly cars and small trucks, although some work on large trucks, buses, or tractor-trailers. Using a broad knowledge of automotive construction and repair techniques, repairers must develop appropriate methods for each job. Body repairers usually work alone with only general directions from supervisors. In some shops, helpers or apprentices assist experienced repairers.

Continuing education throughout a career in auto body repair is required to gain new skills and to keep up with technological changes in automotive parts, body materials and electronics.

Repairers work indoors in body shops that are noisy, because of hammering against metal and the use of power tools. Most shops are well ventilated to disperse dust and paint fumes. Body repairers often work in awkward or cramped positions, and much of their work is strenuous and dirty. Hazards include cuts from sharp metal edges, burns from torches and heated metal, injuries from power tools, and fumes from paint.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		Certificate of Completion (Auto Body Assistant, Refinish Technician, or Advanced Auto Body Technician)
		√	Certificate of Completion (Welding Technology)
Frank Phillips College Borger, Perryton		√	Certificate of Completion (Welding Technology)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Optional: National Institute for Automotive Service Excellence (ASE) Certification

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Automobile Repair & Maintenance	56%	Motor Vehicle/Vehicle Parts & Supplies	2%
Automobile Dealers	25%	Animal Slaughtering/Processing	2%
Self Employed/Unpaid Family Workers	11%	Local Government	2%

FOR MORE INFORMATION

Automotive Service Association, Inc., P.O. Box 929, Bedford, TX 76095-0929, (800) 272-7467, <http://www.asashop.org>

National Automotive Technicians Education Foundation, 101 Blue Seal Drive, Suite 101, Leesburg, VA 20175, (703) 669-6650, <http://www.natef.org>

National Institute for Automotive Service Excellence (ASE), 101 Blue Seal Drive, SE, Suite 101, Leesburg, VA 20175, toll free (888) 273-8378, <http://www.asecert.org>

For additional website sources, please refer to the Resource Index.

Automotive Body Repairer

Automotive Service Technician / Mechanic

PANHANDLE

Average Wage
\$15.24

*Average Annual
Job Openings*
44

Employment in
2002 2012
1,170 1,295

TEXAS

Average Wage
\$15.77

*Average Annual
Job Openings*
2,581

Employment in
2002 2012
58,546 68,776

UNITED STATES

Employment in
2002 2012
818,000 919,000

Female 2%
Minority 40%

EMPLOYMENT CODES

OES 85302

*O*NET 49-3023.01*

*Automotive Service
Technicians & Mechanics*

JOB DESCRIPTION

Adjust, repair, and overhaul automotive vehicles. May use computerized diagnostic equipment to identify engine malfunctions. May estimate damage for customer and negotiate repair cost.



SKILLS AND APTITUDES NEEDED

- ◆ Mechanical aptitude
- ◆ Good reading, mathematics, and computer skills
- ◆ Strong communication and analytical skills
- ◆ Basic knowledge in automotive repair, electronics, chemistry and physics



Automotive mechanics inspect, maintain, and repair automobiles and light trucks, such as vans and pickups, with gasoline engines. Because so many auto components now use electronics, mechanics must be familiar with at least the basic principles of electronics to recognize a malfunction and be able to test and replace electronic components. Although some problems can be fixed with simple computerized adjustments, mechanics frequently work with dirty and greasy parts, and in awkward positions. They often lift heavy parts and tools. Dealers typically furnish expensive power tools, engine analyzers, and other diagnostic equipment but mechanics usually provide their own hand tools and many experienced workers have a large amount of money invested in them.

Continuing education throughout a career in auto mechanics is required to gain new skills and to keep up with technological changes in automotive parts, materials and electronics.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S. (Associate in Applied Science Degree), Automotive Technology
	√		Certificate of Completion (Automotive Technology)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Optional: National Automotive Technicians Education Foundation (NATEF) Certification

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Automotive Repair & Maintenance	34%
Automobile Dealers	23%
Self-employment/Unpaid Family Workers	17%
Automobile Parts, Accessories, & Tire Stores	7%
General Merchandise Stores	5%
Local Government	4%
Motor Vehicle/Vehicle Parts & Supplies	2%
Gasoline Stations	2%

FOR MORE INFORMATION

Automotive Service Association, Inc., P.O. Box 929, Bedford, TX 76095-0929, (800) 272-7467, <http://www.asashop.org>

National Automotive Technicians Education Foundation, 101 Blue Seal Drive, Suite 101, Leesburg, VA 20175, (703) 669-6650, <http://www.natef.org>

National Institute for Automotive Service Excellence (ASE), 101 Blue Seal Drive, SE, Suite 101, Leesburg, VA 20175, toll free (888) 273-8378, <http://www.asecert.org>

For additional website sources, please refer to the Resource Index.

Automotive Service Technician / Mechanic

Bus and Truck Mechanic / Diesel Engine Specialist

PANHANDLE

Average Wage
\$14.83

*Average Annual
Job Openings*
14

Employment in
2002 2012
381 416

TEXAS

Average Wage
\$16.06

*Average Annual
Job Openings*
832

Employment in
2002 2012
19,308 22,654

UNITED STATES

Employment in
2002 2012
267,000 305,000

Female 1%
Minority 34%

EMPLOYMENT CODES

OES 85311

O*NET 49-3031.00
*Bus and Truck Mechanics and
Diesel Engine Specialists*

JOB DESCRIPTION

Repair and maintain the operating condition of trucks, buses, and all types of diesel engines. Diagnose problems, disassemble engines, examine parts for defects and wear, and replace parts as needed.



SKILLS AND APTITUDES NEEDED

- ◆ Mechanical aptitude
- ◆ Strong problem solving skills
- ◆ Basic knowledge in automotive repair, electronics, mathematics and physics
- ◆ Good physical condition
- ◆ State commercial driver's license to test drive trucks or buses on public roads



Diesel mechanics repair and maintain the diesel engines that power transportation equipment, such as heavy trucks, buses, and locomotives. Some mechanics also work on bulldozers, cranes, road graders, farm tractors, and combines. A small number of mechanics repair automobiles and boats. Mechanics who work for organizations that maintain their own vehicles spend most of their time doing preventive maintenance, to ensure that equipment can be operated safely.

Diesel mechanics usually work indoors, although they occasionally make repairs to vehicles on the road. They lift heavy parts and tools, handle greasy and dirty parts, and stand or lie in awkward positions to repair vehicles and equipment. Normally, shops are well-lighted, heated and ventilated, however, some shops can be drafty and noisy.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		Certificate of Completion (Diesel Mechanics Technology)
		√	A.A.S. (Associate in Applied Science Degree), Automotive Technology Major
		√	Certificate of Completion (Automotive Technology)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Optional: National Institute for Automotive Service Excellence (ASE) Certification,
 Master Heavy-Duty Truck Technician
 (certification available in six different areas of heavy truck repair)

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Local Government	13%	Automotive Repair & Maintenance	7%
General Freight Trucking	11%	Automobile Dealers	5%
Motor Vehicle/Vehicle Parts & Supplies	10%	Specialized Freight Trucking	5%
Elementary/Secondary Schools	7%	Commercial & Industrial Equipment	3%

FOR MORE INFORMATION

Automotive Service Association, Inc., P.O. Box 929, Bedford, TX 76095-0929, (800) 272-7467, <http://www.asashop.org>

National Automotive Technicians Education Foundation, 101 Blue Seal Drive, Suite 101, Leesburg, VA 20175, (703) 669-6650, <http://www.natef.org>.

National Institute for Automotive Service Excellence (ASE), 101 Blue Seal Drive, SE, Suite 101, Leesburg, VA 20175, toll free (888) 273-8378, <http://www.asecert.org>

For additional website sources, please refer to the Resource Index.

Bus and Truck Mechanic / Diesel Engine Specialist

Construction Equipment Operator

PANHANDLE

Average Wage
\$13.39

*Average Annual
Job Openings*
20

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
529	584

TEXAS

Average Wage
\$13.84

*Average Annual
Job Openings*
1,051

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
26,065	29,875

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
353,000	389,000

Female 2%
Minority 37%

EMPLOYMENT CODES

OES 97956

*O*NET 47-2073.00*
Operating Engineers and
Other Construction
Equipment Operators

JOB DESCRIPTION

Use machinery to move construction materials, earth and other heavy materials at construction sites by moving levers or foot pedals, operating switches, or turning dials.



SKILLS AND APTITUDES NEEDED

- ◆ Mechanical aptitude
- ◆ Good physical condition and sense of balance
- ◆ Good eye-hand-foot coordination and ability to judge distance
- ◆ May require the ability to work at heights



Construction equipment operators use trench excavators, road graders, and similar equipment to clear and grade land to prepare it for construction of roads, buildings, and neighborhoods and may operate machinery that applies asphalt and concrete to roads and other structures. They may operate excavation and loading machines equipped with scoops, shovels, or buckets that dig sand, gravel, earth, or similar materials and load it into trucks or onto conveyors. Sometimes they may drive and control industrial trucks or tractors equipped with forklifts or booms for lifting materials or with hitches for pulling trailers.

In addition to controlling the equipment, operators also set up and inspect the equipment, make adjustments, and perform some maintenance and minor repairs.

Operating heavy construction equipment can be dangerous but, as with most machinery, accidents generally can be avoided by observing proper operating procedures and safety practices.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering

For information on Panhandle Area private training providers or public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Local Government	25%
Highway/Street/Bridge Construction	20%
Utility System Construction	12%
Specialty Trade Contractors	10%
Heavy/Civil Engineering Construction	6%
Nonresidential Building Construction	5%
Mining Support Activities	4%
Self-employed/Unpaid Family Workers	4%

FOR MORE INFORMATION

National Center for Construction Education and Research, P.O. Box 141104, Gainesville, FL 32614-1104, (888) 622-3720, <http://www.nccer.org>

Associated General Contractors of America, 2300 Wilson Boulevard, Suite 400, Arlington, VA 22201, (703) 548-3118, <http://www.agc.org>

International Union of Operating Engineers, 1125 17th St. NW., Washington, DC 20036, (202) 429-9100, <http://www.iuoe.org>

For additional website sources, please refer to the Resource Index.

Construction Equipment Operator

Carpenter

PANHANDLE

Average Wage

\$16.02

Average Annual

Job Openings

19

Employment in

2002 2012

693 773

TEXAS

Average Wage

\$13.90

Average Annual

Job Openings

1,506

Employment in

2002 2012

49,550 56,543

UNITED STATES

Employment in

2002 2012

1,209,000 1,331,000

Female 1%

Minority 40%

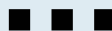
JOB DESCRIPTION

Construct, erect, install and repair structures, fixtures, and equipment of wood, plywood, and wallboard, using carpentry tools and woodworking machines.



SKILLS AND APTITUDES NEEDED

- ◆ Ability to solve arithmetic problems quickly and accurately
- ◆ Manual dexterity
- ◆ Eye-hand coordination
- ◆ Physical fitness
- ◆ Good sense of balance
- ◆ Knowledge of carpentry, mechanical drawing, and general mathematics



Working from blueprints or instructions from supervisors, carpenters measure, mark and arrange materials. They cut, fit and assemble wood and other materials in the construction of buildings, highways, bridges, docks, industrial plants, boats, and many other structures. Some specialties include setting forms for concrete construction, erecting scaffolding, framing walls, building stairs, and laying hardwood floors.

Carpentry work is sometimes strenuous. Prolonged standing, climbing, bending, and kneeling are often necessary. Carpenters risk injury working with sharp or rough materials, using sharp tools and power equipment, and from slips or falls. Many carpenters work outdoors in uncomfortable weather.

EMPLOYMENT CODES

OES 87102

*O*NET 47-2031.00*

Carpenters

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo, Dumas, Hereford		√	A.A.S. (Associate in Applied Science Degree), Drafting Major
		√	Certificate of Completion (Drafting)
Carpenters and Joiners Local Union No. 665, Apprenticeshp & Training Trust Amarillo	√		Carpenter Apprenticeship Program

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Optional: Journeyman's License

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Self Employed/Unpaid Family Workers	28%
Nonresidential Building Construction	24%
Building Finishing Contractors	10%
Residential Building Construction	7%
Foundation, Structure & Building Exterior Contractors	7%
Highway, Street & Bridge Construction	3%
Specialty Trade Contractors	3%
Elementary/Secondary School	2%

FOR MORE INFORMATION

Associated Builders and Contractors, 4250 N. Fairfax Dr., 9th Floor, Arlington, VA 22203-1607, (703) 812-2000, <http://www.abc.org>

Associated General Contractors of America, 2300 Wilson Blvd., Suite 400, Arlington, VA 22201, (703) 548-3118, <http://www.agc.org> — Panhandle of Texas Chapter, 1707 W. 8th Ave., Amarillo, TX 79101, (806) 374-1924, <http://agcamarillo.com>

Home Builders Institute, National Association of Home Builders, 1201 15th St., NW, 6th Floor, Washington, DC 20005, (800) 795-7955, <http://www.hbi.org>

United Brotherhood of Carpenters and Joiners of America, 101 Constitution Ave. NW, Washington, DC 20001, <http://www.carpenters.org> — Carpenters and Joiners Local No. 665, 702 South Madison, Amarillo, TX 79101, (806) 373-4574

For additional website sources, please refer to the Resource Index.

Carpenter

Computer Support Specialist

PANHANDLE

Average Wage
\$20.46

*Average Annual
Job Openings*
16

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
453	550

TEXAS

Average Wage
\$20.22

*Average Annual
Job Openings*
1,324

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
35,796	44,635

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
507,000	660,000

Female 29%
Minority 17%

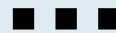
EMPLOYMENT CODES

OES 25104

*O*NET* 15-1041.00
Computer Support Specialists

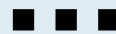
JOB DESCRIPTION

Respond to computer users' inquiries, complaints, and requests for technical assistance, maintain records of repairs and technical assistance rendered, and conduct follow-up to ensure satisfaction with service.



SKILLS AND APTITUDES NEEDED

- ◆ Aptitude for electronics
- ◆ Competent with business systems and computers
- ◆ Ability to identify and analyze problems
- ◆ Good communication and customer service skills
- ◆ Basic knowledge of mechanical technology
- ◆ Good vision



Computer support specialists/technicians provide technical assistance and training to computer system users. They investigate and resolve computer software and hardware problems for the users. Technicians use automated diagnostic programs and may answer clients' inquiries via the telephone or electronic mail concerning the use of printing, word processing, programming languages, electronic mail, and operating systems. Some technicians may go to the user's location to assist in person.

Technicians may work for a particular vendor, assisting only customers that have purchased that vendor's products, or they may work for a company in which they provide on-site support to other employees. Some technicians may specialize in performing research and development activities involving computer technical assistance, training, and client relationships. Increasingly, technicians work for help-desk or support services firms, where they provide customer support on a contract basis to clients as more of this type of work is outsourced. This is an evolving occupation.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S. (Associate in Applied Science Degree), Electronic Systems Technology, Microcomputer Service Specialist, CIS-Microcomputer Specialist and CIS-Software Systems and Networking Majors
		√	Certificate of Completion (Electronic Systems Technology, Microcomputer Service Specialist, CIS- Microcomputer Specialist and CIS-Software Systems and Networking Specialist)
Clarendon College Clarendon, Pampa	√		A.A.S. (Associate in Applied Science Degree), Information Technology Major
Frank Phillips College Borger, Perryton	√		A.A.S. (Associate in Applied Science Degree), Microcomputer Specialist Major

For information on Panhandle Area private training providers or public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Professional and vendor-specific certifications are preferred and often required

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Software Publishers	14%	Junior Colleges	4%
Elementary/Secondary Schools	10%	Depository Credit Intermediation	4%
State Government	5%	General Medical & Surgical Hospitals	4%
Local Government	5%	Insurance Carriers	4%

FOR MORE INFORMATION

Association for Computing Machinery (ACM), 1515 Broadway, New York, NY 10036, (800) 342-6626, <http://www.acm.org>

Institute for Certification of Computing Professionals (ICCP), 2350 East Devon Ave., Suite 115, Des Plaines, IL 60018-4610, (800) 843-8227, <http://www.iccp.org>

Institute of Electrical and Electronics Engineers—USA (IEEE), 1828 L St. NW, Suite 1202, Washington, DC 20036-5104, (202) 785-0017, <http://www.ieee.org>

For additional website sources, please refer to the Resource Index.

Computer Support Specialist

Computer Systems Analyst

PANHANDLE

Average Wage
\$26.55

*Average Annual
Job Openings*
19

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
458	598

TEXAS

Average Wage
\$33.36

*Average Annual
Job Openings*
1,680

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
39,183	51,554

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
468,000	653,000

Female 29%
Minority 17%

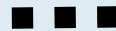
EMPLOYMENT CODES

OES 25102

O*NET 15-1051.00
Computer Systems Analysts

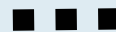
JOB DESCRIPTION

Analyze business, scientific, and technical problems for application to electronic data processing systems and convert business procedures into a programmable form for computer-assisted solutions.



SKILLS AND APTITUDES NEEDED

- ◆ Aptitude for analytical work
- ◆ Ability to think logically and pay close attention to detail
- ◆ Ability to concentrate and deal with a number of tasks simultaneously
- ◆ Strong problem solving skills
- ◆ Broad knowledge of and experience with computer systems and technologies
- ◆ Ability to communicate with computer personnel as well as staff with no computer background



Computer systems analysts coordinate with management, network and database administrators, and computer users to determine the requirements to meet the information needs of the organization. They outline the flow of information within the company for enterprise resource planning and other business intelligence systems. They plan and develop new computer systems or devise ways to apply existing systems' resources to additional operations.

Analysts use techniques such as structured analysis, data modeling, information engineering, mathematical model building, sampling, and cost accounting to plan systems. Many analysts are involved with networking—connecting all of their organization's computers internally and/or externally for tasks such as e-mail or the World Wide Web.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S. (Associate in Applied Science Degree), Computer Information Systems Major
	√		A.S. (Associate in Science Degree), Business Administration/Computer Information Systems Major
Clarendon College Clarendon, Pampa	√		A.A. (Associate in Arts Degree), Computer Information Systems Major
Frank Phillips College Borger, Perryton	√		A.A.S. (Associate in Applied Science Degree), Management Information Systems in E-Commerce and Cisco and Novell Networking Major
Wayland Baptist University Amarillo	√		B.S.O.E. (Bachelor of Science in Occupational Education), Computer Information Systems Major
West Texas A&M University Canyon	√		B.B.A. (Bachelor of Business Administration Degree), Computer Information Systems Major

For information on Panhandle Area private training providers or public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Professional and vendor-specific certifications are preferred and often required

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

State Government	13%	Local Government	5%
Federal Government	9%	Software Publishers	5%
Insurance Carriers	8%	Self-employed/Unpaid Family Workers	5%
Colleges/Universities/Professional Schools	7%	Data Processing/Hosting/Related Services	3%

FOR MORE INFORMATION

Association for Computing Machinery (ACM), 1515 Broadway, New York, NY 10036, (800) 342-6626, <http://www.acm.org>

Institute for Certification of Computing Professionals (ICCP), 2350 East Devon Ave., Suite 115, Des Plaines, IL 60018-4610, (800) 843-8227, <http://www.iccp.org>

Institute of Electrical and Electronics Engineers—USA (IEEE), 1828 L St. NW, Suite 1202, Washington, DC 20036-5104, (202) 785-0017, <http://www.ieee.org>

Quality Assurance Institute, 2101 Park Center Drive, Suite 200, Orlando, FL 32835-7614, (407) 363-1111, <http://www.qaiworldwide.org>

For additional website sources, please refer to the Resource Index.

Computer Systems Analyst

Correctional Officer / Jailer

PANHANDLE

Average Wage
\$13.78

*Average Annual
Job Openings*
38

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
835	1049

TEXAS

Average Wage
\$13.87

*Average Annual
Job Openings*
1,814

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
35,927	46,616

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
427,000	531,000

Female 23%

Minority 38%

EMPLOYMENT CODES

OES 63017

O*NET 33-3012.00

*Correctional Officers
And Jailers*

JOB DESCRIPTION

Guard inmates in penal or rehabilitative institution in accordance with established regulations and procedures. May guard prisoners in transit between jail, courtroom, prison, or other point, traveling by automobile or public transportation.



SKILLS AND APTITUDES NEEDED

- ◆ Good judgment
- ◆ Ability to think and act quickly
- ◆ Strong interpersonal communications skills
- ◆ Required to meet formal standards of physical fitness
- ◆ Must pass screening for drug abuse and background check
- ◆ Proficiency in firearms and self-defense skills



Correctional officers are responsible for overseeing individuals who have been arrested and are awaiting trial or who have been convicted of a crime and sentenced to serve time in a jail, reformatory, or penitentiary. They maintain security and inmate accountability in order to prevent disturbances, assaults, or escapes. Officers have no law enforcement responsibilities outside the institution where they work.

Correctional officers report orally and in writing on inmate conduct, security breaches, disturbances, violations of rules, and any unusual occurrences. In jail and prison facilities with direct supervision cellblocks, officers work unarmed. The officers enforce regulations primarily through interpersonal communications and the use of progressive sanctions, such as loss of some privileges.

Working in a correctional institution can be stressful. Officers may work indoors or outdoors depending on their specific duties. Officers work all shift hours of days, nights, weekends and holidays.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S (Associate in Applied Science Degree), Criminal Justice Corrections Major
	√	√	Certificate of Completion (Criminal Justice Corrections) A.S (Associate in Science Degree), Criminal Justice Major
West Texas A&M University Canyon		√	B.A. (Bachelor of Arts Degree/ B.S. Bachelor of Science Degree) Criminal Justice Major

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

United States Citizenship with no felony convictions

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

State Government	60%
Local Government	31%
Facilities Support Services	5%
Federal Government	3%

FOR MORE INFORMATION

The American Correctional Association, 4380 Forbes Boulevard, Lanham, MD 20706-4322, (800) 222-5646, <http://www.corrections.com/aca/index.html>

The American Jail Association, 1135 Professional Court, Hagerstown, MD 21740, (301) 790-3930, <http://www.corrections.com/aja/index.html>

For additional website sources, please refer to the Resource Index.

Correctional Officer / Jailer

Dental Hygienist

PANHANDLE

Average Wage
\$24.28

*Average Annual
Job Openings*
5

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
136	172

TEXAS

Average Wage
\$28.43

*Average Annual
Job Openings*
393

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
7,659	10,936

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
148,000	212,000

Female 97%
Minority 8%

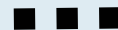
EMPLOYMENT CODES

OES 32908

*O*NET* 29-201.00
Dental Hygienists

JOB DESCRIPTION

Perform dental prophylactic treatments and instruct groups and individuals in the care of the teeth and mouth. May specialize in providing clinical services and health education in program designed to improve and maintain oral health of school children.



SKILLS AND APTITUDES NEEDED

- ◆ Good manual dexterity to use dental instruments in a patient's mouth with little room for error
- ◆ Ability to work well with others
- ◆ Knowledge in biology, chemistry, mathematics



Dental hygienists work under the supervision of a licensed dentist. Duties may include cleaning and polishing teeth, taking X-rays, tending sutures, performing fluoride treatments, and administering pit and fissure sealant. Hygienists also instruct patients on proper oral health care and preventive dentistry. At times, the hygienist may be called upon to schedule appointments and to act as office manager.

Flexible scheduling is a distinctive feature of this job. Full-time, part-time, evening, and weekend work is widely available. Dentists frequently hire hygienists to work only 2 or 3 days a week, so hygienists may hold jobs in more than one dental office. Hygienists work in clean, well-lighted offices. Important health safeguards include strict adherence to proper radiological procedures, and use of appropriate protective devices when administering anesthetic gas. Hygienists also wear safety glasses, surgical masks, and gloves to protect themselves from infectious diseases.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S. (Associate in Applied Science Degree), Dental Hygiene Major
		√	Certificate of Completion (Dentist Aide)

For information on Panhandle Area private training providers, please refer to the Resource Index.

LICENSE/CERTIFICATION

Required: State of Texas Licensure (must pass Western Regional Examining Board Dental Hygiene Exam or meet alternative credentialing requirements)

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Dentist Offices/Clinics	96%
Physicians Offices	1%
General Medical & Surgical Hospitals	1%
Federal Government	1%
Self-employed/Unpaid Family Workers	1%

FOR MORE INFORMATION

American Dental Association,
211 E. Chicago Ave., Suite 1814, Chicago, IL 60611-2678, (312) 440-2500, <http://www.ada.org>

American Dental Hygienists' Association, 444 N. Michigan Ave., Suite 3400, Chicago, IL 60611, (312) 440-8900, <http://www.adha.org>

Texas State Board of Dental Examiners, 333 Guadalupe St., Tower 3, Suite 800, Austin, Texas, 78701, (512) 463-6400, <http://www.tsbde.state.tx.us>

For additional website sources, please refer to the Resource Index.

Dental Hygienist

Electrician

PANHANDLE

Average Wage
\$18.10

*Average Annual
Job Openings*
28

Employment in
2002 2012
727 867

TEXAS

Average Wage
\$18.02

*Average Annual
Job Openings*
1,886

Employment in
2002 2012
45,366 55,256

UNITED STATES

Employment in
2002 2012
659,000 814,000

Female 2%
Minority 25%

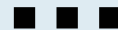
EMPLOYMENT CODES

OES 87202

*O*NET* 47-2111.00
Electricians

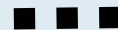
JOB DESCRIPTION

Install, maintain, and repair wiring, electrical equipment, and fixtures. Measure, cut, bend, thread, assemble, and install electrical conduit using hacksaw and conduit bender. Pull wires through conduit and splice wires by stripping insulation from terminal leads and twisting or soldering.



SKILLS AND APTITUDES NEEDED

- ◆ Basic knowledge in mathematics, electricity, electronics, mechanical drawing, science, and shop
- ◆ Good agility and dexterity
- ◆ Good health and at least average physical strength
- ◆ Reading skills to work with building blueprints
- ◆ Good color vision to identify electrical wires by color



Electricians install, connect, test, and maintain electrical systems for a variety of purposes. They may install and maintain electronic controls for machines in business and industry. They may install coaxial or fiber cable for computers and other telecommunications equipment. Some electricians install climate control, telephone, fire alarm and security systems. Electricians specializing in residential work may wire homes or replace old fuse boxes with new circuit breakers to accommodate additional appliances.

Electricians' work is sometimes strenuous. They may stand for long periods of time and frequently work on ladders and scaffolds. Some may work in dusty, dirty, hot, or wet conditions, or in confined areas, ditches or other uncomfortable places. Electricians risk injury from electrical shock, falls, and cuts. Some electricians may have to travel to job sites.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo Electrical Joint Apprenticeship and Training Committee (JATC) Amarillo	√		Electrician Apprenticeship Program
Texas Panhandle Independent Electrical Contractors of Texas Borger	√		Electrician Apprenticeship Program
Amarillo College Amarillo, Dumas, Hereford		√	Certificate of Completion (Electromechanical Technician, Instrument and Control Technician, Telecommunications Specialist, and General Electronics System Assistant)
Frank Phillips College Borger, Perryton		√	A.A.S. (Associate in Applied Science Degree), Industrial Manufacturing Technology Major

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Optional: Journeyman's License

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Building Equipment Contractors	56%	Petroleum/Coal Products Manufacturing	5%
Self-employed/Unpaid Family Workers	8%	Electrical Power Generation/Transmission/Distribution	3%
Local Government	5%	Nonresidential Building Construction	3%
Fabricated Metal Product Manufacturing	5%	Utility System Construction	2%

FOR MORE INFORMATION

Independent Electrical Contractors, Inc., 4401 Ford Ave., Suite 1100, Alexandria, VA 22302, (800) 456-4324, <http://www.ieci.org>

International Brotherhood of Electrical Workers (IBEW), 900 Seventh Street, NW, Washington, DC 20001, (202) 833-7000, <http://www.IBEW.org>

National Electrical Contractors Association (NECA), 3 Bethesda Metro Center, Suite 1100, Bethesda, MD 20814, (301) 657-3110, <http://www.necanet.org>

The National Joint Apprenticeship and Training Committee for the Electric Industry, 301 Prince Georges Blvd., Suite D, Upper Marlboro, MD 20744, <http://www.njatc.org> — Amarillo Electrical JATC, P.O. Box 245, 204 S. Fannin, Amarillo, TX 79105, (806) 372-1581

For additional website sources, please refer to the Resource Index.

Electrician

Emergency Medical Technician / Paramedic

PANHANDLE

Average Wage
\$11.95

*Average Annual
Job Openings*
8

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
206	265

TEXAS

Average Wage
\$12.47

*Average Annual
Job Openings*
577

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
12,179	16,545

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
179,000	238,000

Female 67%
Minority 39%

EMPLOYMENT CODES

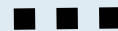
OES 32508

*O*NET* 29-2041.00

*Emergency Medical
Technicians and Paramedics*

JOB DESCRIPTION

Administer first aid treatment and transport sick or injured persons to medical facility, working as a member of an emergency medical team.



SKILLS AND APTITUDES NEEDED

- ◆ Emotionally stable
- ◆ Good agility, dexterity, and physical coordination
- ◆ Ability to lift and carry heavy loads
- ◆ Good eyesight (corrective lenses may be used) with accurate color vision



Depending on the nature of the emergency, Emergency Medical Technicians (EMTs) are dispatched to the scene by a 911 operator and often work with police and fire department personnel. Once they arrive, they determine the nature and extent of the patient's condition while trying to ascertain whether the patient has preexisting medical problems. Following strict procedures, they give appropriate emergency care and transport the patient. At the medical facility, EMTs help transfer patients to the emergency department, and report their observations and actions to staff.

EMTs work both indoors and outdoors, in all types of weather. They are required to do considerable kneeling, bending, and heavy lifting. They risk noise-induced hearing loss from sirens and back injuries from lifting patients. EMTs may be exposed to diseases such as Hepatitis-B and AIDS, as well as violence from drug overdose victims or psychologically disturbed patients. The work is not only physically strenuous, but also stressful, involving life-or-death situations and suffering patients. Because emergency services function 24 hours a day, EMTs may have irregular working hours.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S. (Associate in Applied Science Degree), Emergency Medical Services Professions Major
		√	Certificate of Completion (Emergency Medical Services Professions))

For information on Panhandle Area private training providers or public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Required: Certification by National or State Registry for Basic or Intermediate EMT (Emergency Medical Technician)

Required: Must re-register every two years and earn required continuing education credits

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Local Government	32%
Ambulatory Health Care Services	29%
General Medical/Surgical Hospitals	29%
School/Employee Bus Transportation	5%
Employment Services	1%
Self-employed/Unpaid Family Workers	1%
Support Services	1%

FOR MORE INFORMATION

National Association of Emergency Medical Technicians, P. O. Box 1400, Clinton, MS 39060, (800) 346-2368, <http://www.naemt.org>

National Highway Transportation Safety Administration, EMS Division, 400 7th St. SW., Washington, DC 20590, (888) 327-4236, <http://www.nhtsa.dot.gov/portal/site/nhtsa>

National Registry of Emergency Medical Technicians, Rocco V Morando Building, 6610 Busch Blvd., P.O. Box 29233, Columbus, OH 43229, (614) 888-4484, <http://www.nremt.org>

Texas Department of State Health Services, Bureau of Emergency Management, 1100 West 49th St., Austin, TX 78756, (512) 834-6700, Regional Office, 1109 Kemper, Lubbock, TX 79403, (806) 767-0488, <http://www.dshs.state.tx.us/hcq/ems>

For additional website sources, please refer to the Resource Index.

Emergency Medical Technician / Paramedic

Engineering Technician

PANHANDLE

Average Wage

\$24.16

Average Annual

Job Openings

15

Employment in*

2002 2012

400 450

TEXAS

Average Wage

\$25.99

Average Annual

Job Openings

NA

Employment in

2002 2012

NA NA

UNITED STATES

Employment in

2004 2014

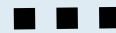
91,200 102,400

Female 30%

Minority 26%

JOB DESCRIPTION

Assist engineers, architects, or surveyors and mapping scientists in laboratory or production activities, such as data collection, equipment or machine design, testing, quality control, and efficiency studies.



SKILLS AND APTITUDES NEEDED

- ◆ Creativity to assist in design projects
- ◆ Knowledge in science, engineering, mathematics, and electronics
- ◆ Good communication skills
- ◆ Ability to work well with people, often as a team member



Engineering technicians use the principles and theories of science, engineering, and mathematics to solve technical problems in research and development, manufacturing, sales, construction, inspection, and maintenance. Their work is more limited in scope and more practically oriented than that of scientists and engineers. Most engineering technicians specialize in certain areas, learning skills and working in the same disciplines as engineers.

Some technicians may assist in design work, often using computer-aided design equipment. Other technicians may make prototype versions of newly designed equipment. They may set up equipment, prepare and conduct experiments, or study ways to improve manufacturing efficiency. Some technicians may be exposed to hazards from equipment, chemicals, or toxic materials.

*Combined Civil, Electrical & Electronic, Industrial and Mechanical Technicians

EMPLOYMENT CODES

OES 22599

*O*NET 17-3029.00*

*Engineering Technicians,
Except Drafters, All*

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.S. (Associate of Science Degree), Engineering Major
	√		A.S. (Associate of Science Degree), Engineering Technology Major
		√	A.A.S. (Associate in Applied Science Degree), Electronic Engineering Technology Major
Frank Phillips College Borger, Perryton		√	A.A.S. (Associate in Applied Science Degree), Industrial Manufacturing Technology Major
West Texas A&M University Canyon	√		B.S. (Bachelor of Science Degree), Engineering Technology Major

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Optional: National Institute for Certification in Engineering Technologies (NICET) Certification

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Colleges/Universities	16%	Aircraft & Parts	6%
Federal Government	13%	Research/Testing Services	6%
Engineer/Architect Services	10%	Management/Public Relations	5%
Personnel Supply Services	7%		

FOR MORE INFORMATION

Accreditation Board for Engineering and Technology, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202, (410) 347-7700, <http://www.abet.org>

The Junior Engineering Technical Society (JETS), 1420 King St., Suite 405, Alexandria, VA 22314, (703) 548-5387, <http://www.jets.org>

National Institute for Certification in Engineering Technologies, 1420 King St., Alexandria, VA 22314-2794, (888) 476-4238, <http://www.nicet.org>

For additional website sources, please refer to the Resource Index.

Engineering Technician

Executive Secretary / Administrative Assistant

PANHANDLE

Average Wage
\$15.31

*Average Annual
Job Openings*
56

Employment in
2002 2012
2,468 2,553

TEXAS

Average Wage
\$17.00

*Average Annual
Job Openings*
3,861

Employment in
2002 2012
139,172 151,134

UNITED STATES

Employment in
2002 2012
1,526,000 1,658,000

Female 58%
Minority 19%

EMPLOYMENT CODES

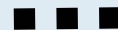
OES 55108

O*NET 43-6011.00

*Executive Secretaries
and Administrative Assistants*

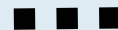
JOB DESCRIPTION

Provide high-level administrative support by conducting research, preparing statistical reports, handling information requests, and performing clerical functions such as preparing correspondence, receiving visitors, arranging conference calls, and scheduling meetings. May also train and supervise lower-level clerical staff.



SKILLS AND APTITUDES NEEDED

- ◆ Knowledge of software application, such as word processing, spreadsheets, and database management
- ◆ Proficiency in keyboarding, spelling, punctuation, grammar, and oral communication
- ◆ Good interpersonal skills, discretion, and judgment
- ◆ Organizational and management abilities
- ◆ Initiative and the ability to work independently



Office automation and organizational restructuring have led executive secretaries and administrative assistants to assume a wider range of responsibilities once reserved for managerial and professional staff. Many executive secretaries and administrative assistants now provide orientation for new staff, conduct research on the Internet, and operate and troubleshoot new office technologies.

Their core responsibilities include performing and coordinating an office's administrative activities: storing, retrieving, and integrating information for dissemination to staff and clients. They serve as information managers for an office, schedule appointments, organize and maintain paper and electronic files, manage projects and provide information via the telephone, postal mail, and e-mail. They may also prepare correspondence and handle travel arrangements.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√	√	A.A.S (Associate in Applied Science Degree), Office Administration and Office Administration Information Management Specialist Majors Certificate of Completion (Office Administration Professional or Office Technology)
Clarendon College Clarendon, Pampa	√	√	A.A.S (Associate in Applied Science Degree), Office Technology Major Certificate of Completion (Office Technology)
Frank Phillips College Borger, Perryton	√	√	A.A.S (Associate in Applied Science Degree), Administrative Assistant Major Certification of Completion (General Office Occupations)

For information on Panhandle Area private training providers or public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Optional: International Association of Administrative Professionals Certification

Optional: Certified Professional Secretary (CPS) or Certified Administrative Professional (CAP) Certification

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

State Government	27%
Local Government	6%
Religious Organizations	6%
Colleges/Universities/Professional Schools	5%
Depository Credit Intermediation	3%
Elementary/Secondary Schools	3%
General Medical/Surgical Hospitals	3%
Physician Offices	2%

FOR MORE INFORMATION

International Association of Administrative Professionals, 10502 NW Ambassador Dr., P.O. Box 20402, Kansas City, MO 64195-0404, <http://www.iaap-hq.org>

For additional website sources, please refer to the Resource Index.

Executive Secretary / Administrative Assistant

Farm, Ranch and Other Agricultural Manager

PANHANDLE

Average Wage
\$22.04

*Average Annual
Job Openings*
60

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
1,979	2,242

TEXAS

Average Wage
\$19.83

*Average Annual
Job Openings*
420

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
13,481	15,365

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
218,000	229,000

Female 11%
Minority 31%

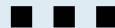
EMPLOYMENT CODES

OES 71005

*O*NET 11-9011.02*
*Farm, Ranch, & Other
Agricultural Managers*

JOB DESCRIPTION

Guide and assist farmers in maximizing the financial returns to their land by managing day-to-day activities. Directly supervise and coordinate the activities of agricultural workers. May work in smaller establishments performing both supervisory and management functions, including the areas of accounting, marketing, and personnel.



SKILLS AND APTITUDES NEEDED

- ◆ Managerial skills to organize and operate a business
- ◆ Competent with computers
- ◆ Basic knowledge of accounting and bookkeeping
- ◆ Knowledge of credit sources for buying seed, fertilizer, and other inputs necessary for planting
- ◆ Familiar with safety regulations and requirements of governmental agricultural support programs
- ◆ Mechanical aptitude for use of tools, equipment
- ◆ Knowledge of relationships between farm operations such as use of pesticides balanced with environmental conditions



When managing a small crop farm for an absentee owner, a farm manager may assume responsibility for all functions, from selecting the crops to participating in planting and harvesting. Alternately, the owner of a large farm may employ a farm manager to oversee a single activity. Farm management firms and corporations involved in agriculture employ highly trained professional farm managers who may oversee tenant operators of several farms. In these cases, farm managers may establish output goals; determine financial constraints; monitor production and marketing; hire, assign, and supervise workers; determine crop transportation and storage requirements; and oversee maintenance of the property and equipment. Farm managers overseeing several farms may divide their time between traveling to meet farmers and landowners, and planning the farm operations in their offices.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Clarendon College Clarendon, Pampa	√	√	A.A.S. (Associate in Applied Science Degree), Ranch and Feedlot Operations Major Certificate of Completion (Ranch and Feedlot Operations)
Frank Phillips College Borger, Perryton	√	√	A.A.S. (Associate in Applied Science Degree), Farm and Ranch Management or Swine Management Majors Certificate of Completion (Agriculture Supervisor)
West Texas A&M University Canyon	√		B.S. (Bachelor of Science Degree), Agribusiness, Agriculture Business and Economics, or Equine Industry and Business Majors

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Optional: American Society of Farm Managers and Rural Appraisers Accredited Farm Manager (AFM) Accreditation

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Animal Production	86%
Crop Production	12%
Self-employed/Unpaid Family Workers	1%
Support Activities for Crop Production	1%

FOR MORE INFORMATION

Alternative Farming System Information Center (AFSIC), National Agricultural Library USDA, 10301 Baltimore Ave., Room 132, Beltsville, MD 20705-2351, (301) 504-6559, <http://www.nal.usda.gov/afsic>

American Society of Farm Managers and Rural Appraisers, 950 Cherry St., Suite 508, Denver, CO 80246-2664, (303) 758-3513, <http://www.asfmra.org>

ATTRA, National Sustainable Agriculture Information Service, P.O. Box 3657, Fayetteville, AR 72702, (800) 346-9140, <http://www.attra.ncat.org>

Center for Rural Affairs,
145 Main St., P.O. Box 136, Lyons, NE 68038, (402) 687-2100, <http://www.cfra.org>

For additional website sources, please refer to the Resource Index.

Farm, Ranch and Other Agricultural Manager

Firefighter

PANHANDLE

Average Wage

\$18.79

Average Annual

Job Openings

25

Employment in

2000 2010

441 560

TEXAS

Average Wage

\$19.72

Average Annual

Job Openings

1,181

Employment in

2000 2010

20,454 26,329

UNITED STATES

Employment in

2000 2010

282,000 340,000

Female 2%

Minority 25%

EMPLOYMENT CODES

OES 63008

*O*NET 33-2011.00*

Fire Fighters

JOB DESCRIPTION

Help protect the public by rapidly responding to a variety of emergencies including putting out a fire, treating injuries at the scene of a traffic accident or medical emergency, or performing other vital functions.



SKILLS AND APTITUDES NEEDED

- ◆ Mechanical aptitude
- ◆ Mental alertness and good judgment
- ◆ Endurance and strength
- ◆ Self-discipline and dependability
- ◆ Courage and a sense of public service
- ◆ Initiative and ability to get along well with others



Fire fighters are frequently the first emergency personnel at a scene. At fires, they connect hose lines to hydrants, operate a pump to send water to high-pressure hoses, and position ladders to enable them to deliver water to the fire. They also rescue victims, provide emergency medical attention as needed, ventilate smoke-filled areas, and attempt to salvage the contents of buildings. Sometimes they remain at the site of a disaster for days at a time, rescuing trapped survivors and assisting with medical treatment.

Some fire fighters work in hazardous materials units that are trained for the control, prevention, and cleanup of materials.

Between alarms, fire fighters clean and maintain equipment, conduct practice drills and fire inspections, and participate in physical fitness activities. They also prepare written reports on fire incidents and review fire science literature to keep abreast of technological developments and changing administrative practices and policies.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S. (Associate in Applied Science Degree), Fire Protection Technology Major
	√		Certificate of Completion (Fire Protection - Basic Firefighter)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Required: Texas Basic Firefighter Certification

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Local Government	95%
Support Services	2%
Federal Government	2%
Fabricated Metal Product Manufacturing	1%

FOR MORE INFORMATION

International Association of Fire Fighters, 1750 New York Ave. N.W., Washington, DC 20006, (202) 737-8484, <http://www.iaff.org>

U.S. Fire Administration, 16825 South Seton Ave., Emmitsburg, MD 21727, (301) 447-1000, <http://www.usfa.fema.gov>

For additional website sources, please refer to the Resource Index.

Firefighter

Heating, Air Conditioning, and Refrigeration Mechanic

PANHANDLE

Average Wage
\$12.73

*Average Annual
Job Openings*
13

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
311	403

TEXAS

Average Wage
\$17.00

*Average Annual
Job Openings*
853

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
20,237	26,078

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
249,000	328,000

Female 1%
Minority 28%

EMPLOYMENT CODES

OES 85902

*O*NET 49-9021.02*
*Heating, Air Conditioning,
and Refrigeration Mechanics*

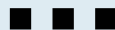
JOB DESCRIPTION

Install and repair heating, air conditioning, and refrigeration systems.



SKILLS AND APTITUDES NEEDED

- ◆ Basic knowledge of plumbing, electrical work, mechanical drawing, applied physics, chemistry, blueprint reading, computer applications
- ◆ Basic understanding of microelectronics
- ◆ Interpersonal skills for dealing with customers
- ◆ Good physical condition



Heating and air conditioning mechanics install, maintain, and repair systems which control temperature, humidity, and the total air quality in residential, commercial, and industrial facilities. Heating and A/C systems consist of many mechanical, electrical, and electronic components such as motors, compressors, pumps, fans, ducts, pipes, thermostats, and switches.

When mechanics service equipment, they must use care to conserve, recover, and recycle chlorofluorocarbon (CFC) and hydrochlorofluorocarbon (HCFC) refrigerants used in A/C and refrigeration systems. They recover it by venting it into proper cylinders and recycle it for reuse with special filter-dryers.

Mechanics may work outside in cold or hot weather or in buildings which are uncomfortable because the A/C or heating equipment is malfunctioning. They often work in awkward or cramped positions and must sometimes work in high places. They risk injuries from electrical shock and burns. Appropriate safety equipment is necessary when handling refrigerants because contact can cause skin damage or blindness, and inhalation can cause asphyxiation.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√	√	A.A.S (Associate in Applied Science Degree), Industrial Maintenance Technology Major Certificate of Completion (Industrial Maintenance Technology)
Frank Phillips College Borger, Perryton		√	Certification of Completion (Air Conditioning/Heating)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Optional: North American Technician Excellence, Inc. (NATE) Certification
(Air Conditioning Excellence Program)

Optional: Journeyman's License

Required: Certification for the purchase or handling of specific refrigerants

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Building Equipment Contractors	50%	Elementary/Secondary Schools	6%
Self-employed/Unpaid Family Workers	13%	Local Government	2%
Hardware/Plumbing/Heating Equipment Supplies	9%	Federal Government	1%
Commercial/Industrial Machinery and Equipment	6%	Animal Slaughtering/Processing	1%

FOR MORE INFORMATION

Air Conditioning Contractors of America, 2800 Shirlington Rd., Suite 300, Arlington, VA 22206, (703) 575-4477, <http://www.acca.org>

North American Technician Excellence (NATE), 4100 North Fairfax Drive, Suite 210, Arlington, VA 22203, toll free (877) 420-6283, <http://www.natex.org>

Associated Plumbing, Heating, & Cooling Contractors, Texas Panhandle Chapter, 87 N. Fannin, Amarillo, TX 79106, (806) 376-9797

Associated Plumbing-Heating-Cooling Contractors of Texas, 505 E. Huntland Dr., Suite 170, Austin, TX 78752, (800) 831-9313, <http://www.phcc-tx.org>

Plumbing-Heating-Cooling Contractors Association, 180 S. Washington St., P. O. Box 6808, Falls Church, VA 22040, (800) 533-7694, <http://www.phccweb.org>

For additional website sources, please refer to the Resource Index.

Heating, Air Conditioning, and Refrigeration Mechanic

Industrial Machinery Mechanic

PANHANDLE

Average Wage
\$18.44

*Average Annual
Job Openings*
18

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
533	599

TEXAS

Average Wage
\$18.69

*Average Annual
Job Openings*
634

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
19,882	22,207

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
197,000	208,000

Female 4%
Minority 37%

EMPLOYMENT CODES

OES 85110

O*NET 49-9041.00
*Industrial Machinery
Mechanics*

JOB DESCRIPTION

Repair and maintain the operating condition of industrial production and processing machinery, printing machinery, and refinery and pipeline distribution systems in accordance with diagrams, operating manuals, or manufacturer specifications.



SKILLS AND APTITUDES NEEDED

- ◆ Aptitude for mechanics
- ◆ Basic knowledge of mechanical drawing, mathematics, blueprint reading, physics, computers and electronics
- ◆ Manual dexterity
- ◆ Good physical conditioning and agility



Industrial machine mechanics maintain and repair machinery in a plant or factory. Their work is important not only because an idle machine will delay production, but also because a machine that is not properly repaired and maintained may damage the final product or injure the operator.

Mechanics are subject to common shop injuries such as cuts and bruises, and use protective equipment such as hard hats, protective glasses, and safety belts. They may also face additional hazards because they often work on ladders or underneath or above large machinery in cramped conditions. Because factories and other facilities cannot afford breakdowns of industrial machinery, mechanics may be called to the plant at night or on weekends for emergency repairs. Overtime is common among industrial machine mechanics.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S (Associate in Applied Science Degree), Industrial Maintenance Technology Major
		√	Certificate of Completion (Industrial Maintenance Technology)
		√	A.A.S (Associate in Applied Science Degree), Instrument & Control Technology Major
		√	Certificate of Completion (Instrument & Control Technology)
Frank Phillips College Borger, Perryton		√	A.A.S (Associate in Applied Science Degree), Industrial Manufacturing Major

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Animal Slaughtering & Processing	21%
Basic Chemical Manufacturing	8%
Fabricated Metal Product Manufacturing	8%
Petroleum/Coal Products Manufacturing	6%
Mining Support Activities	5%
Commercial/Industrial Machinery & Equipment Maintenance	5%
Self Employed/Unpaid Family Workers	5%
Glass/Glass Product Manufacturing	5%

FOR MORE INFORMATION

The National Tooling and Machining Association, 9300 Livingston Rd., Fort Washington, MD 20744, (800) 248-6862, <http://www.ntma.org>

Precision Machined Products Association, 6700 West Snowville Rd., Brecksville, OH 44141, (440) 526-0300, <http://www.pmpa.org>

For additional website sources, please refer to the Resource Index.

Industrial Machinery Mechanic

Industrial Truck/Tractor Operator

PANHANDLE

Average Wage
\$12.87

*Average Annual
Job Openings*
18

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
690	742

TEXAS

Average Wage
\$11.59

*Average Annual
Job Openings*
1,314

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
40,813	46,220

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
594,000	659,000

Female 4%
Minority 61%

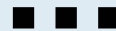
EMPLOYMENT CODES

OES 97947

*O*NET 53-7051.00*
*Industrial Truck and
Tractor Operators*

JOB DESCRIPTION

Drive and control industrial trucks or tractors equipped to move materials around warehouses, storage yards, factories, or construction sites.



SKILLS AND APTITUDES NEEDED

- ◆ Mechanical aptitude
- ◆ Good physical condition and sense of balance
- ◆ Good eye-hand-foot coordination and ability to judge distance
- ◆ May require the ability to work at heights



A typical industrial truck, often called a forklift or lift truck, has a hydraulic lifting mechanism and forks for moving heavy and large objects. Industrial truck and tractor operators also may operate tractors that pull trailers loaded with materials, goods, or equipment within factories and warehouses or around outdoor storage areas.

In industries that work around the clock, material movers may work overnight shifts.

Operating heavy construction equipment can be dangerous but, as with most machinery, accidents generally can be avoided by observing proper operating procedures and safety practices. Workers who use industrial trucks or other dangerous equipment must receive specialized training in safety awareness and procedures. Many of the training requirements are standardized through the U.S. Occupational Safety and Health Administration. This training is usually provided by the employer.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

FOR MORE INFORMATION

National Center for Construction Education and Research, P.O. Box 141104, Gainesville, FL 32614-1104, (888) 622-3720, <http://www.nccer.org>

Associated General Contractors of America, 2300 Wilson Boulevard, Suite 400, Arlington, VA 22201, (703) 548-3118, <http://www.agc.org>

Industrial Truck Association, 1750 K St. NW., Suite 460 Washington, DC 20006, (202) 296-9880, <http://www.indtrk.org>

International Union of Operating Engineers, 1125 17th St. NW., Washington, DC 20036, (202) 429-9100, <http://www.iuoe.org>

For additional website sources, please refer to the Resource Index.

Industrial Truck/Tractor Operator

Licensed Practical / Licensed Vocational Nurse

PANHANDLE

Average Wage
\$14.99

*Average Annual
Job Openings*
44

Employment in
2002 2012
1,177 1,354

TEXAS

Average Wage
\$16.68

*Average Annual
Job Openings*
2,636

Employment in
2002 2012
60,506 73,680

UNITED STATES

Employment in
2002 2012
702,000 844,000

Female 92%
Minority 44%

EMPLOYMENT CODES

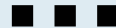
OES 32505

*O*NET 29-2061.00*

*Licensed Practical and
Licensed Vocational Nurses*

JOB DESCRIPTION

Care for ill, injured, convalescent, and handicapped persons in hospitals, clinics, private homes, sanitariums, and similar institutions. Dress wounds and give enemas and alcohol rubs; take and record temperature, pulse, blood pressure, and respiration; assemble and use such equipment as catheters, tracheotomy tubes, and oxygen suppliers. Sterilize equipment and supplies using germicides and autoclave.



SKILLS AND APTITUDES NEEDED

- ◆ A caring, sympathetic nature
- ◆ Emotionally stable to handle stress
- ◆ Able to follow orders and work under close supervision



Licensed vocational nurses (LVNs) care for the sick, injured, convalescent, and disabled under the direction of physicians and registered nurses. They prepare and give injections, apply ice packs and hot water bottles, and insert catheters. They collect samples from patients for testing, perform routine laboratory tests, feed patients, and record food and liquid intake and output. They help patients with bathing, dressing, and personal hygiene.

Most nurses in hospitals and nursing homes work a 40-hour week, but because patients need round-the-clock care, some work nights, weekends, and holidays. They often stand for long periods and help patients move in bed, stand, or walk. LVNs may face hazards from caustic chemicals, radiation, and infectious diseases such as hepatitis. They are subject to back injuries when moving patients and shock from electrical equipment. They often must deal with the stress of heavy workloads and the patients they care for may be confused, irrational, agitated, or uncooperative.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		Certificate of Completion (Nursing-Vocational Nursing)
Childress Regional Medical Center Childress	√		School of Vocational Nursing
Frank Phillips College Borger, Perryton	√		Certificate of Completion (Vocational Nursing)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Required: Passing of the National Council Licensure Examination for Practical Nurses (NCLEX-PN)
(License issued by the State Board of Vocational Nurse Examiners)

Required: Specific continuing education credits as required for licensure renewal

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

General Medical/Surgical Hospitals	33%
Nursing Care Facilities	28%
Physician's Offices	12%
Home Health Care Services	7%
Community Care Facilities for Elderly	3%
Colleges/Universities/Professional Schools	2%
Local Government	2%
Outpatient Care Centers	2%

FOR MORE INFORMATION

National Association for Practical Nurse Education and Service, Inc., P.O. Box 25647, Alexandria, VA 22313,
(703) 933-1003, <http://www.napnes.org>

National League for Nursing, 61 Broadway, 33rd Floor, New York, NY 10006, (212) 363-5555, <http://www.nln.org>

Board of Nurse Examiners for the State of Texas, 333 Guadalupe St., Suite
3-460, Austin, TX 78701, (512) 305-7400, <http://www.bvne.state.tx.us>

For additional website sources, please refer to the Resource Index.

Licensed Practical / Licensed Vocational Nurse

Machinist

PANHANDLE

Average Wage
\$16.06

*Average Annual
Job Openings*
13

Employment in
2002 2012
540 533

TEXAS

Average Wage
\$15.51

*Average Annual
Job Openings*
743

Employment in
2002 2012
25,551 27,028

UNITED STATES

Employment in
2002 2012
387,000 419,000

Female 4%
Minority 33%

EMPLOYMENT CODES

OES 89108

O*NET 51-4041.00
Machinists

JOB DESCRIPTION

Set up and operate machine tools; fit and assemble parts to make or repair metal parts, mechanisms, tools or machines; apply knowledge of mechanics, shop mathematics, metal properties, and layout machining procedures.



SKILLS AND APTITUDES NEEDED

- ◆ Aptitude in mechanics
- ◆ Experience with machine tools
- ◆ Basic knowledge of computers, electronics, mathematics, blueprint reading, metalworking and drafting
- ◆ Ability to work independently
- ◆ Capability for highly accurate work that requires concentration and physical effort



Machinists use machine tools, such as lathes, drill presses, and milling machines to produce precision metal parts. They use their knowledge of the working properties of metals and their skill with machine tools to plan and carry out the operations needed to make machined products that meet precise specifications. Increasingly, the machine tools used to produce metal parts are computer numerically controlled (CNC), meaning that they contain computer controllers that direct the machine's operations.

Machinists must wear protective equipment such as safety glasses to shield against bits of flying metal and earplugs to dampen machinery noise. They must exercise caution when handling hazardous coolants and lubricants. The job requires stamina, because machinists stand most of the day and at times may need to lift moderately heavy work pieces.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Frank Phillips College Borger, Perryton		√	A.A.S (Associate in Applied Science Degree), Industrial Manufacturing Major

LICENSE/CERTIFICATION

Optional: National Institute of Metalworking Skills (NIMS) Accreditation

Optional: Journeyman's License

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Fabricated Metal Product Manufacturing	33%
Agriculture/Construction/Mining Machinery Manufacturing	14%
Machine Shop/Turned Product/Screw, Nut & Bolt Manufacturing	13%
Petroleum/Coal Products Manufacturing	5%
Rail Transportation	5%
Machinery/Equipment/Merchant Supplies Wholesaling	3%
Engine/Turbine/Power Transmission Equipment Manufacturing	3%
Commercial/Industrial Machinery & Equipment Manufacturing	3%

FOR MORE INFORMATION

The National Tooling and Machining Association, 9300 Livingston Rd., Fort Washington, MD 20744, (301) 248-6200, <http://www.ntma.org>

The Precision Machined Products Association, 6700 West Snowville Rd., Brecksville, OH 44141, (440) 526-0300, <http://www.pmpa.org>

National Institute for Metalworking Skills, Inc., 3251 Old Lee Hwy., Suite 205, Fairfax, VA 22030, (703) 352-4971, www.nims-skills.org

For additional website sources, please refer to the Resource Index.

Machinist

Maintenance and Repair Worker, General

PANHANDLE

Average Wage
\$12.77

*Average Annual
Job Openings*
61

Employment in
2002 2012
1,753 2,025

TEXAS

Average Wage
\$13.22

*Average Annual
Job Openings*
3,871

Employment in
2002 2012
101,677 120,863

UNITED STATES

Employment in
2002 2012
1,266,000 1,472,000

Female 4%
Minority 37%

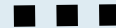
EMPLOYMENT CODES

OES 85132

O*NET 49-9042.00
*Maintenance and Repair
Workers, General*

JOB DESCRIPTION

Perform work involving two or more maintenance skills. Keep the machines, mechanical equipment, and/or structure of an establishment in repair. This occupation is generally found in small establishments where specialization in maintenance work is impractical.



SKILLS AND APTITUDES NEEDED

- ◆ Aptitude in mechanics
- ◆ Basic knowledge in mechanical drawing, electricity, woodworking, blueprint reading, science, and mathematics
- ◆ Basic computer skills
- ◆ Ability for problem-solving and to work without direct supervision
- ◆ Manual dexterity
- ◆ Good health and stamina for walking, standing, reaching and heavy lifting



General maintenance repairers repair and maintain plumbing, electrical, air-conditioning and heating systems. They may repair drywall, roofs, windows, doors, floors, woodwork, and other parts of building structures. They maintain and repair specialized equipment and machinery found in cafeterias, laundries, hospitals, stores, offices, and factories. New buildings sometimes have computer-controlled systems, requiring repairers to have basic computer skills. Repairers do routine preventive maintenance and ensure that machines continue to run smoothly, building systems operate efficiently, and the physical condition of buildings does not deteriorate. Some repairers may be on call for emergency repairs.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S (Associate in Applied Science Degree), Industrial Maintenance Technology Major
		√	Certificate of Completion (Industrial Maintenance Technology)
		√	A.A.S (Associate in Applied Science Degree), Instrument & Control Technology Major
		√	Certificate of Completion (Instrument & Control Technology)
Frank Phillips College Borger, Perryton		√	A.A.S (Associate in Applied Science Degree), Industrial Manufacturing Major

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Local Government	10%	Traveler Accommodation	4%
Elementary/Secondary Schools	9%	Petroleum/Coal Products Manufacturing	3%
Animal Slaughtering/Processing	8%	General Medical/Surgical Hospitals	3%
Real Estate Leasing	8%	Fabricated Metal Product Manufacturing	3%

FOR MORE INFORMATION

Associated Builders and Contractors, 4250 N. Fairfax Dr., 9th Floor, Arlington, VA 22203-1607, (703) 812-2000, <http://www.abc.org>

Associated General Contractors of America, Inc. (AGC), 2300 Wilson Blvd., Suite 400, Arlington, VA 22201, (703) 548-3118, <http://www.agc.org>—Panhandle of Texas Chapter, 1707 W. 8th Ave., Amarillo, TX 79101, (806) 374-1924, <http://www.agcamarillo.com>

Mechanical Contractors Association of America, 1385 Piccard Dr., Rockville, MD 20850, (301) 869-5800, <http://www.mcaa.org>

National Electrical Contractors Association (NECA), 3 Bethesda Metro Center, Suite 1100, Bethesda, MD 20814, (301) 657-3110, <http://www.necanet.org>

For additional website sources, please refer to the Resource Index.

Maintenance and Repair Worker, General

Manager, General and Operations

PANHANDLE

Average Wage
\$35.57

*Average Annual
Job Openings*
85

Employment in
2002 2012
2,665 3,014

TEXAS

Average Wage
\$44.58

*Average Annual
Job Openings*
6,157

Employment in
2002 2012
163,753 194,440

UNITED STATES

Employment in
2002 2012
2,049,000 2,425,000

Female 31%
Minority 15%

EMPLOYMENT CODES

OES 19005

*O*NET 11-1021.00*
*General and Operations
Managers*

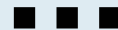
JOB DESCRIPTION

Includes both top and mid-level managers whose duties and responsibilities are too diverse and general in nature to be classified in any functional or line area of management and administration. These managers generally work through departmental or subordinate executives.



SKILLS AND APTITUDES NEEDED

- ◆ Highly developed personal skills
- ◆ Ability to evaluate interrelationships of numerous factors
- ◆ Ability to analyze, compare, and interpret large amounts of information and data quickly
- ◆ Ability to communicate clearly and persuasively
- ◆ Possess qualities of leadership, self-confidence, motivation, decisiveness, flexibility, sound business judgment, and determination



All organizations have specific goals and objectives that they strive to meet. Managers devise strategies and formulate policies to ensure that these objectives are met. In large organizations, managers' duties may be highly specialized. In smaller organizations, a manager is often responsible for purchasing, hiring, training, quality control, and supervisory duties.

Long hours, including evenings and weekends, are standard for most managers, though their schedules may be flexible. Substantial travel between international, national, regional, and local offices to monitor operations and meet with customers, staff, and other executives, is often required. In large organizations, frequent job transfers between local offices or subsidiaries are common. Managers are under intense pressure to earn higher profits, provide better service, or attain fundraising and charitable goals.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford		√	A.S. (Associate in Science Degree), Business Administration Major
		√	A.A.S. (Associate in Applied Science Degree), Business Management Major
		√	Certificate of Completion (Business Management)
Clarendon College Clarendon, Pampa		√	A.A. (Associate in Arts Degree), Management Major
Frank Phillips College Borger, Perryton		√	A.A.S. (Associate of Applied Science Degree), Management Major
		√	Certificate of Completion (Management)
Wayland Baptist University Amarillo	√		B.B.A. (Bachelor of Business Administration Degree)
	√		B.A. (Bachelor of Arts Degree), Business Administration Major
	√		B.S.O.E. (Bachelor of Science in Occupational Education), Business Administration Major
	√		M.B.A. (Masters of Business Administration Degree)
West Texas A&M University Canyon	√		B.B.A. (Bachelor of Business Administration Degree)
	√		M.B.A. (Masters of Business Administration Degree)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Local Government	4%	Automotive Repair & Maintenance	2%
Oil & Gas Extraction	4%	Mining Support Activities	2%
Grocery Stores	3%	Machinery/Equipment/Supplies Dealers	2%
Depository Credit Intermediation	3%	Building Equipment Contractors	2%

FOR MORE INFORMATION

American Management Association, 1601 Broadway, New York, NY 10019, (212) 586-8100, <http://www.amanet.org>

Institute of Certified Professional Managers (ICPM), James Madison University, MSC 5504, Harrisonburg, VA 22807, (800) 568-4120, (540) 568-3247, <http://cob.jmu.edu/icpm>

National Management Association, 2210 Arbor Blvd., Dayton, OH 45439, (937) 294-0421, <http://www.nma1.org>

For additional website sources, please refer to the Resource Index.

Manager, General and Operations

Medical Assistant

PANHANDLE

Average Wage
\$9.72

*Average Annual
Job Openings*
55

Employment in
2002 2012
746 1,159

TEXAS

Average Wage
\$10.77

*Average Annual
Job Openings*
3,410

Employment in
2002 2012
42,270 68,551

UNITED STATES

Employment in
2002 2012
365,000 579,000

Female 54%
Minority 23%

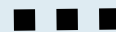
EMPLOYMENT CODES

OES 66005

*O*NET 31-9092.00*
Medical Assistants

JOB DESCRIPTION

Perform various duties under the direction of physician in examination and treatment of patients. Prepare treatment room, inventory supplies, and instruments, and set up patient for attention of physician.



SKILLS AND APTITUDES NEEDED

- ◆ Interpersonal skills to meet the public such as neat and well-groomed, courteous, pleasant manner, ability to put patients at ease and explain physicians' instructions
- ◆ Ability to respect the confidential nature of medical information
- ◆ Basic knowledge of mathematics, health, biology, typing, bookkeeping, computers and office skills
- ◆ Reasonable level of manual dexterity and visual acuity



Medical assistants answer telephones, greet patients, update and file patient medical records, fill out insurance forms, handle correspondence, schedule appointments, arrange for hospital admission and laboratory services, and handle billing and bookkeeping. They may take medical histories and record vital signs, explain treatment procedures to patients, prepare patients for examination, and assist the physician during the examination. They collect and prepare laboratory specimens or perform basic laboratory tests on the premises, dispose of contaminated supplies, and sterilize medical instruments. They instruct patients about medication and special diets, prepare and administer medication as directed by a physician, authorize drug refills as directed, telephone prescriptions to a pharmacy, draw blood, prepare patients for x-rays, take electrocardiograms, remove sutures, and change dressings.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Academy of Professional Careers Amarillo	√		Medical Assisting Program
Amarillo College Amarillo, Dumas, Hereford		√	Certificate of Completion (Medical Data Specialist)
		√	Certificate of Completion (Pharmacy Technology)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

- Optional: American Association of Medical Assistants (Medical Assistant Certification)
- Optional: American Medical Technologists (Registered Medical Assistant)
- Optional: American Society of Podiatric Medical Assistants
(Podiatric Medical Assistant Certification)
- Optional: Joint Commission on Allied Health Personnel in Ophthalmology
(Ophthalmic Medical Assistant Certification)

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Physician's Offices	62%	Outpatient Care Centers	4%
Health Practitioner's Offices	11%	Self-employed/Unpaid Family Workers	1%
General Medical/Surgical Hospitals	10%	Ambulatory Health Care Services	1%
Dentist's Offices	5%	Specialty Hospitals	1%

FOR MORE INFORMATION

The American Association of Medical Assistants, 20 N. Wacker Dr., Suite 1575, Chicago, IL 60606, (312) 899-1500, <http://www.aama-ntl.org>

American Society of Podiatric Medical Assistants, 2124 S. Austin Blvd., Cicero, IL 60804, (708) 863-6303 or (888) 882-7762, www.aspma.org

Joint Commission on Allied Health Personnel in Ophthalmology, 2025 Woodlane Drive, St. Paul, MN 55125-2995, (800) 284-3937, <http://www.jcahpo.org>

American Medical Technologists, 710 Higgins Rd., Park Ridge, IL 60068, (847) 823-5169, <http://www.amt1.com>

For additional website sources, please refer to the Resource Index.

Medical Assistant

Medical Eligibility Specialist

PANHANDLE

Average Wage

\$11.68

Expected Average Annual Job Openings

7

Employment in

2002	2012
------	------

230	260
-----	-----

TEXAS

Average Wage

\$14.92

Average Annual Job Openings

379

Employment in

2002	2012
------	------

16,130	17,315
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UNITED STATES

Employment in

2002	2012
------	------

266,000	276,000
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Female **68%**

Minority **27%**

EMPLOYMENT CODES

OES 53314 (evolving)

*O*NET 43-9041.02*

Insurance Policy Processing Clerks

JOB DESCRIPTION

Determine applicant eligibility for health insurance, process data necessary for admission of new patients into health services, ensure proper coding for insurance billing, and handle inquiries from prospective applicants and patients.



SKILLS AND APTITUDES NEEDED

- ◆ Good communication and customer service skills
- ◆ Familiar with computers, good typing skills
- ◆ Basic knowledge of anatomy
- ◆ Analytical and organizational abilities



This occupation is evolving from the insurance policy processing clerk. Medical Eligibility Specialists may be employed in hospitals, private medical cost management companies, insurance companies, or county and state welfare offices. Specialists must maintain a working knowledge of CPT and ICD-9 coding principles, governmental regulations, protocols and third party requirements regarding billing and billing documentation. They must assure that all services documented in a patient's chart are coded appropriately.

Specialists in a medical cost management company must be familiar with medical codes and terminology to determine eligibility for insurance benefits and reduce non-payments.

Specialists in an insurance company process applications for changes to, reinstatement of, and cancellation of insurance policies. They review applications to insure that all questions have been answered, compile data on policy changes, determine automatic reinstatement according to company policies, and verify accuracy of company records.

Specialists in a welfare office obtain, verify, and calculate income and resources to determine client financial eligibility for services such as Medicaid programs.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Academy of Professional Careers Amarillo	√		Medical Assisting Program
Amarillo College Amarillo, Dumas, Hereford		√	Certificate of Completion (Medical Data Specialist)
		√	Certificate of Completion (Pharmacy Technology)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Optional: American Academy of Professional Coders Certification

Optional: American Health Information Management Association Certification

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Insurance Agents/Brokers	59%
Fire/Marine Insurance Processing	22%
Life Insurance Processing	13%
Accident/Health Service Planning	4%

These employment levels are based on statistics derived from the Insurance Policy Processing industry. As an emerging occupation, Medical Eligibility Specialists will be primarily employed in industries related to medical cost management or medical insurance processing.

FOR MORE INFORMATION

American Health Information Management Association (AHIMA), 233 N. Michigan Ave., Suite 2150, Chicago, IL 60601-5800, (312) 233-1100, <http://www.ahima.org>

CPT Coding Resource Center, College of American Pathologists, http://www.cap.org/apps/docs/cpt_coding/cpt.html

The National Alliance for Insurance Education and Research, 3630 North Hills Dr., Austin, TX 78731, (800)633-2165, <http://www.scic.com>

For additional website sources, please refer to the Resource Index.

Medical Eligibility Specialist

Medical and Clinical Laboratory Technician

PANHANDLE

Average Wage
\$13.07

*Average Annual
Job Openings*
8

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
168	200

TEXAS

Average Wage
\$13.81

*Average Annual
Job Openings*
515

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
9,936	12,407

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
147,000	176,000

Female 71%
Minority 39%

EMPLOYMENT CODES

OES 32905

O*NET 29-2012.00
*Medical and Clinical
Laboratory Technicians*

JOB DESCRIPTION

Perform chemical, microscopic and bacteriologic laboratory tests on blood and body fluids to help in the diagnosis and treatment of diseases. Work in healthcare and biotechnology laboratories under the supervision of medical and clinical laboratory technologists.



SKILLS AND APTITUDES NEEDED

- ◆ Analytical judgment
- ◆ Ability to work under pressure
- ◆ Ability to pay close attention to detail
- ◆ Manual dexterity and normal color vision
- ◆ Good computer skills



Medical lab technicians examine body fluids and other materials, looking for bacteria, parasites, and other microorganisms; analyze the chemical content of fluids; match blood for transfusions, and test for drug levels in the blood to show how a patient is responding to treatment. Technicians may prepare specimens, operate automated instruments capable of performing a number of tests simultaneously, or they may use microscopes, cell counters and other sophisticated lab equipment. They usually work under the supervision of medical and clinical laboratory technologists or laboratory managers.

Clinical laboratory personnel are trained to work with infectious specimens. When proper methods of infection control and sterilization are followed, few hazards exist. Laboratories usually are well lighted and clean; however, specimens, solutions and reagents used in the laboratory sometimes produce odors. Technicians may spend a great deal of time on their feet.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S. (Associate in Applied Science Degree), Medical Laboratory Technology Major
Wayland Baptist University Amarillo		√	Pre-Medical Technology Program
West Texas A&M University Canyon		√	B.S.M.T. (Bachelor of Science in Medical Technology Degree, Pre-Clinical)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Optional: Board of Registry of the American Society of Clinical Pathologists Certification

Optional: American Medical Technologists Certification

Optional: Credentialing Commission of the International Society for Clinical Laboratory Technology Certification

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

General Medical/Surgical Hospitals	54%	Federal Government	3%
Physician's Offices	20%	Colleges/Universities/Professional Schools	2%
Medical/Diagnostic Laboratories	10%	Outpatient Care Centers	2%
Ambulatory Health Care Services	4%	State Government	1%

FOR MORE INFORMATION

American Medical Technologists, 710 Higgins Rd., Park Ridge, IL 60068, (800) 275-1268, <http://www.amt1.com>

American Society for Clinical Laboratory Science, 6701 Democracy Blvd., Suite 300, Bethesda, MD 20817, (301) 657-2768, <http://www.ascls.org>

American Society for Clinical Pathology, Board of Registry, 2100 West Harrison St., Chicago, IL 60612, (312) 738-1336, <http://www.ascp.org/bor>

National Accrediting Agency for Clinical Laboratory Sciences, 8410 W. Bryn Mawr Ave., Suite 670, Chicago, IL 60631, (773) 714-8880, <http://www.naacls.org>

For additional website sources, please refer to the Resource Index.

Medical and Clinical Laboratory Technician

Medical Records and Health Information Technician

PANHANDLE

Average Wage
\$12.49

*Average Annual
Job Openings*
11

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
165	250

TEXAS

Average Wage
\$12.99

*Average Annual
Job Openings*
620

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
8,969	13,885

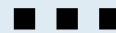
UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
147,000	216,000

Female 92%
Minority 40%

JOB DESCRIPTION

Code patient diagnoses and treatments according to medical classification systems and enter the codes into the patient's records. Use codes in medical software programs to review and analyze patient records and to cross-index medical information.



SKILLS AND APTITUDES NEEDED

- ◆ Basic knowledge of medical terminology, health, anatomy, physiology, biology, and chemistry
- ◆ Competent with computers
- ◆ Knowledge of legal aspects of health information, coding and abstraction of data, statistics, database management, and quality improvement methods
- ◆ Ability to pay close attention to detail
- ◆ Strong clinical background to analyze the contents of medical records



Medical records technicians assemble patients' health information and ensure all forms are completed. They assign a code to each diagnosis and procedure. They use a software program to assign the patient to one of several hundred "diagnosis-related groups" (DRG). The DRG determines the amount the hospital will be reimbursed if the patient is covered by Medicare or other insurance programs using the DRG system.

Technicians use computer programs to tabulate and analyze data to help improve patient care, or control costs for use in legal actions or in response to surveys. This is one of the few health occupations in which there is little or no physical contact with patients. Technicians who work at computer monitors for prolonged periods must guard against eyestrain and muscle pain.

EMPLOYMENT CODES

OES 32911

O*NET 29-2071.00
*Medical Records and Health
Information Technicians*

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Academy of Professional Careers Amarillo	√		Administrative Medical/Dental Assistant Program
Amarillo College Amarillo, Dumas, Hereford	√		Certificate of Completion (Medical Data Specialist)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Required: Passing of American Health Information Management Association Written Exam

Optional: ART (Accredited Record Technician) Certification

In order for a technician to be eligible to take the ART Exam, the degree plan or program must be accredited by the American Medical Association's CAAHEP (Commission on Accreditation of Allied Health Education Programs)

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

General Medical/Surgical Hospitals	36%	Federal Government	3%
Physician's Offices	30%	Local Government	2%
Nursing Care Facilities	12%	Home Health Care Services	2%
Outpatient Care Services	6%	Health Practitioner's Offices	2%

FOR MORE INFORMATION

American Health Information Management Association, 233 N. Michigan Ave., Suite 2150, Chicago, IL 60601-5800, (312) 233-1100, website <http://www.ahima.org>

Commission on Accreditation of Allied Health Education Programs, 1361 Park St., Clearwater, FL 33756, (727) 210-2350, <http://www.caahep.org>

For additional website sources, please refer to the Resource Index.

Medical Records and Health Information Technician

Network and Computer Systems Administrator

PANHANDLE

Average Wage
\$27.30

Average Annual
Job Openings
11

Employment in	2002	2012
	221	299

TEXAS

Average Wage
\$28.80

Average Annual
Job Openings
908

Employment in	2002	2012
	20,854	27,621

UNITED STATES

Employment in	2002	2012
	251,000	345,000

Female 29%
Minority 17%

EMPLOYMENT CODES

OES 85705 (evolving)

O*NET 15-1071.00
Network and Computer
Systems Administrators

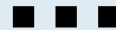
JOB DESCRIPTION

Install, configure, manage and troubleshoot local area networks (LAN) and wide area networks (WAN). Connect entire systems of workstations, printers and modems to Internet, e-mail, and other application servers via fiber optic and other types of cables.



SKILLS AND APTITUDES NEEDED

- ◆ Aptitude for electronics
- ◆ Competent with business systems and computers
- ◆ Ability to identify and analyze problems
- ◆ Good communication skills
- ◆ Good manual dexterity and vision
- ◆ Basic knowledge of telecommunications, mechanical and engineering technology



Computer network *technicians* test and evaluate hardware and software to determine efficiency, reliability and compatibility with computer systems and upgrade components when necessary. This occupation may also include web page design. Technicians must keep their knowledge current with advances in convergence, bandwidth, speed of data transmission, operating systems, and application servers.

Many *administrators* have experience as systems analysts, computer engineers, programmers, operators or in other computer occupations. Employers seek *administrators* with experience in specific software or technology to be used on the job. In addition to technical skills, employers also seek administrators who have business and interpersonal skills.

Employment in the computer information systems and data processing services industries is expected to grow rapidly due to the increasing use of information technologies. In order to remain competitive, firms will continue to install sophisticated computer networks, set up Internet and intranet sites, and engage in electronic commerce.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S. (Associate in Applied Science Degree), Computer Information Systems Major
	√		A.A.S. (Associate in Applied Science Degree), Electronics System Technology Major - Networking Technology Option
Clarendon College Clarendon, Pampa	√		A.A.S. (Associate in Applied Science Degree), Computer Technology Major - Networking Administration
Frank Phillips College Borger, Perryton	√		A.A.S. (Associate in Applied Science Degree), MIS (Management Information Systems) Networking - Cisco and Microsoft Windows 2000 Major
Wayland Baptist University Amarillo	√		B.B.A. (Bachelor of Business Administration Degree) Management Information Systems Major
West Texas A&M University Canyon	√		B.B.A. (Bachelor of Business Administration Degree), Computer Information Systems Major

For information on Panhandle Area private training providers or public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Professional and vendor-specific certifications are preferred and often required

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Elementary/Secondary Schools	10%	Newspaper/Periodical/Book/Directory Publishing	4%
Local Government	9%	Internet Service Providers/Web Search Portal	4%
Insurance Carriers	6%	Data Processin/Hosting/Related Services	4%
Depository Credit Intermediation	5%	Colleges/Universities/Professional Schools	4%

FOR MORE INFORMATION

Association for Computing Machinery (ACM), 1515 Broadway, New York, NY 10036, (800) 342-6626, <http://www.acm.org>

Institute for Certification of Computing Professionals (ICCP), 2350 East Devon Ave., Suite 115, Des Plaines, IL 60018-4610, (800) 843-8227, <http://www.iccp.org>

Institute of Electrical and Electronics Engineers—USA (IEEE), 1828 L St. NW, Suite 1202, Washington, DC 20036-5104, (202) 785-0017, <http://www.ieee.org>

For additional website sources, please refer to the Resource Index.

Network and Computer Systems Administrator

Pharmacy Technician

PANHANDLE

Average Wage
\$11.50

*Average Annual
Job Openings*
13

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
334	426

TEXAS

Average Wage
\$12.44

*Average Annual
Job Openings*
821

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
17,508	23,437

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
211,000	71,000

Female 67%
Minority 39%

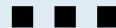
EMPLOYMENT CODES

OES 32518

O*NET 29-2052.00
Pharmacy Technicians

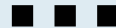
JOB DESCRIPTION

Assist licensed pharmacist in preparing prescribed medication for patients, price and file prescriptions, establish and maintain patient profiles, prepare insurance claim forms, and inventory medication.



SKILLS AND APTITUDES NEEDED

- ◆ Basic knowledge of mathematics, chemistry, English, and health education
- ◆ Strong customer service and communication skills
- ◆ Experience managing inventories
- ◆ Competency in using a computer
- ◆ Qualities of being observant and organized
- ◆ Ability to perform precise, detailed work
- ◆ No prior record of drug or substance abuse



Technicians receive written prescriptions or requests for a prescription refill from patients or doctor's representatives. They must verify that the information on the prescription is complete and accurate. To prepare the prescription, the technician must retrieve, count, pour, weigh, measure, and sometimes mix the medication. Once the prescription is filled, technicians price and file the prescription. Some also clean the pharmacy equipment, help with the maintenance of equipment and supplies, and manage the cash register. In hospitals, technicians read patient charts, prepare and, after it is checked by the supervising pharmacist, deliver medication to patients. They record information about the medication onto the patient's profile. They are responsible for keeping a running inventory of medicines and supplies used. They may be required to lift heavy boxes or to use stepladders to retrieve supplies from high shelves.

Pharmacy technicians refer any questions regarding prescriptions, drug information, or health matters to a pharmacist. A pharmacist must check every prescription before it can be given to a patient.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Academy of Professional Careers Amarillo	√		Pharmacy Technician Program
Amarillo College Amarillo, Dumas, Hereford	√		Certificate of Completion (Pharmacy Technology)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Required: Passing of the Pharmacy Technician Certification Board Exam for Certified Pharmacy Technician

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Health/Personal Care Stores	40%
General Medical/Surgical Hospitals	27%
Grocery Stores	14%
General Merchandise Stores	8%
Physician's Offices	4%
Federal Government	1%
Department Stores	1%
Outpatient Care Centers	1%

FOR MORE INFORMATION

American Society of Health-System Pharmacists, 7272 Wisconsin Ave., Bethesda, MD 20814, (301) 657-3000, website <http://www.ashp.org>

National Association of Chain Drug Stores, 413 N. Lee St., Alexandria, VA 22313-1480, (703) 549-3001, website <http://www.nacds.org>

Pharmacy Technician Certification Board, 2215 Constitution Ave. NW, Washington DC 20037-2985, (800) 363-8012, website <http://www.ptcb.org>

For additional website sources, please refer to the Resource Index.

Pharmacy Technician

Plumber, Pipefitter and Steamfitter

PANHANDLE

Average Wage
\$15.87

*Average Annual
Job Openings*
23

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
632	715

TEXAS

Average Wage
\$17.31

*Average Annual
Job Openings*
1,414

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
35,815	41,713

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
492,000	584,000

Female 1%
Minority 34%

EMPLOYMENT CODES

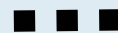
OES 87502

O*NET 47-2152.00

*Plumbers, Pipefitters,
And Steamfitters*

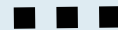
JOB DESCRIPTION

Assemble, install, alter, and repair pipe systems (metal, plastic, ceramic, or composition) that carry water, steam, air, or other liquids or gases. Also install plumbing fixtures, appliances, heating, and waste disposal systems.



SKILLS AND APTITUDES NEEDED

- ◆ Basic knowledge in mathematics, drafting, blueprint reading, computers, and physics
- ◆ Good physical condition



Plumbers install and repair the water, waste disposal, drainage, and gas systems in homes and commercial and industrial buildings. They also install plumbing fixtures—bathtubs, showers, sinks, and toilets—and appliances such as dishwashers and water heaters.

Pipefitters install and repair both high and low-pressure pipe systems used in manufacturing, in the generation of electricity, and in heating and cooling buildings. They also install automatic controls that are increasingly being used to regulate these systems.

Residential water systems use copper, steel, and plastic pipe that can be handled and installed by one or two workers. Municipal sewerage systems are made of large cast iron pipes so installation normally requires crews of pipefitters. Because plumbers and pipefitters frequently must lift heavy pipes, stand for long periods, and sometimes work in uncomfortable or cramped positions, they need physical strength as well as stamina. They may have to work outdoors in inclement weather and they are subject to possible falls from ladders, cuts from sharp tools, and burns from hot pipes or soldering equipment.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo, Dumas, Hereford		√	A.A.S (Associate in Applied Science Degree), Industrial Maintenance Technology Major
		√	Certificate of Completion (Industrial Maintenance Technology)
Associated Plumbing, Heating, & Cooling Contractors (APHCC), Texas Panhandle Chapter Amarillo	√		Apprenticeship Program
Frank Phillips College Borger, Perryton		√	Certification of Completion (Air Conditioning/Heating)
Plumbers & Steam Fitters Local No. 196 Amarillo	√		Apprenticeship Program

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Required: Journeyman's License

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Building Equipment Contractors	44%	Nonresidential Building Construction	5%
Fabricated Metal Product Manufacturing	13%	Utility System Construction	4%
Self-employed/Unpaid Family Workers	10%	Mining Support Activities	3%
Local Government	6%	Specialty Trade Contractors	2%

FOR MORE INFORMATION

Associated Plumbing, Heating, & Cooling Contractors, Texas Panhandle Chapter, 87 N. Fannin, Amarillo, TX 79106, (806) 376-9797

Associated Plumbing-Heating-Cooling Contractors of Texas, 505 E. Huntland Dr., Suite 170, Austin, TX 78752, (800) 831-9313, <http://www.phcc-tx.org>

Plumbing-Heating-Cooling Contractors Association, 180 S. Washington St., P.O. Box 6808, Falls Church, VA 22040, (800) 533-7694, <http://www.phccweb.org>

United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the U.S. and Canada, United Association Bldg, 901 Massachusetts Ave. NW, Washington, DC 20001-4397, (202) 628-5823, <http://www.ua.org> —Plumbers & Pipefitters Local #196, 1505 W. 7th St., Amarillo, TX 79101, (806) 374-2895

For additional website sources, please refer to the Resource Index.

Plumber, Pipefitter and Steamfitter

Police and Sheriff's Patrol Officer

PANHANDLE

Average Wage
\$18.24

*Average Annual
Job Openings*
62

Employment in
2002 2012
1,083 1,420

TEXAS

Average Wage
\$20.70

*Average Annual
Job Openings*
3,038

Employment in
2002 2012
50,495 67,808

UNITED STATES

Employment in
2002 2012
619,000 772,000

Female 12%
Minority 29%

EMPLOYMENT CODES

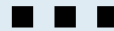
OES 63014

O*NET 33-3051.00

*Police and Sheriff's
Patrol Officers*

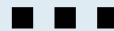
JOB DESCRIPTION

Maintain order, enforce laws and ordinances, and protect life and property in an assigned patrol district. Perform combination of following duties: patrol a specific area on foot or in a vehicle; direct traffic; issue traffic summonses; investigate accidents; apprehend and arrest suspects, or serve legal processes of courts.



SKILLS AND APTITUDES NEEDED

- ◆ Knowledge of laws, legal codes, court procedures and the democratic political process
- ◆ Knowledge of weaponry, public safety, security operations and the protection of people, data, and property
- ◆ Understanding of human behavior and performance
- ◆ Ability to speak clearly, listen and understand information, and respond quickly
- ◆ Ability to see details at a distance



Law enforcement officers perform duties in a variety of ways, depending on the size and type of their organization. They may direct traffic at the scene of a fire, investigate a burglary, or give first aid to an accident victim. Many urban police agencies are becoming more involved in community policing—a practice in which an officer builds relationships with the citizens of local neighborhoods and mobilizes the public to help fight crime.

Some police officers specialize in such diverse fields as chemical and microscopic analysis, training and firearms instruction, or handwriting and fingerprint identification. Others work with special units such as horseback, bicycle, motorcycle or harbor patrol, canine corps, or special weapons and tactics (SWAT) or emergency response teams.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S. (Associate in Applied Science Degree), Criminal Justice Law Enforcement Major
	√	√	Certificate of Completion (Criminal Justice Law Enforcement) A.S. (Associate in Science Degree) Criminal Justice Major
City of Amarillo Police Academy Amarillo	√		Police Academy for Basic Police Officer License
Wayland Baptist University Amarillo		√	B.A. (Bachelor of Arts Degree) Criminal Justice Major
West Texas A&M University Canyon		√	B.A. (Bachelor of Arts Degree)/ B.S. (Bachelor of Science Degree) Criminal Justice Major - Policing

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Required: Texas Commission on Law Enforcement Officer Standards and Education
(TCLEOSE) Certification

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Local Government	88%
Federal Government	7%
State Government	5%

FOR MORE INFORMATION

Texas Commission on Law Enforcement Officer Standards and Education (TCLEOSE), 6330 U.S. Hwy 290 East, Suite 200, Austin, TX 78723, (512) 936-7700, <http://www.tcleose.state.tx.us>

United States Marshals Service, Human Resources Division—Law Enforcement Recruiting, Washington, DC 20530-1000 <http://www.usdoj.gov/marshals>

U.S. Secret Service, Personnel Division, 245 Murray Dr., Building 410, Washington, DC 20223, (202) 406-5800, <http://www.treas.gov/uss>

Bureau of Alcohol, Tobacco, Firearms and Explosives, 650 Massachusetts Avenue NW., Room 8290, Washington, DC 20226, <http://www.atf.treas.gov>

For additional website sources, please refer to the Resource Index.

Police and Sheriff's Patrol Officer

Radiologic Technologist / Technician

PANHANDLE

Average Wage
\$18.64

*Average Annual
Job Openings*
9

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
217	264

TEXAS

Average Wage
\$20.97

*Average Annual
Job Openings*
542

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
11,166	14,505

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
174,000	214,000

Female 65%
Minority 32%

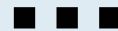
EMPLOYMENT CODES

OES 32919

O*NET 29-2034.02
*Radiologic Technologists
and Technicians*

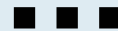
JOB DESCRIPTION

Administer X-rays, CAT scans, and other diagnostic imaging procedures on patients for use in diagnosing medical problems.



SKILLS AND APTITUDES NEEDED

- ◆ Basic knowledge in mathematics, physics, chemistry, and biology
- ◆ Good physical condition may be required to lift or turn disabled patients



Radiologic technicians may specialize in several areas. *Radiographers* produce x-ray films (radiographs) by positioning radiographic equipment, making an exposure, and developing the film. *CT technologists* operate computerized tomography scanners to produce cross sectional views of patients. *Magnetic resonance imaging (MRI) technologists* operate machines using giant magnets and radio waves rather than radiation to create an image. *Sonographers*, also known as *ultrasonographers*, direct nonionizing, high frequency sound waves into areas of the patient's body. The equipment then collects reflected echoes to form an image. The image is viewed on a screen and may be recorded on video tape or photographed.

In addition to preparing patients and operating equipment, radiologic technicians keep patient records and adjust and maintain equipment. They may also prepare work schedules, evaluate equipment purchases, or manage a radiology department. They must follow physicians' orders precisely and conform to regulations concerning use of radiation to protect themselves, their patients, and coworkers from unnecessary exposure.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S. (Associate in Applied Science Degree), Radiation Therapy Major
	√		A.A.S. (Associate in Applied Science Degree), Radiography Major

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Required: American Registry of Radiologic Technologists Certification

Required: Texas Department of State Health Services Medical Radiologic Technologist Certification

Specified by the Texas Department of State Health Services for any Medical Radiologic Technologist (MRT) or Limited Medical Radiologic Technologist (LMRT) who perform dangerous and hazardous procedures

Required: Specific continuing education credits as required for licensure renewal

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

General Medical/Surgical Hospitals	65%	Federal Government	2%
Physician's Offices	19%	Dentist's Offices	1%
Medical/Diagnostic Laboratories	5%	Employment Services	1%
Animal Production	4%	Outpatient Care Centers	1%

FOR MORE INFORMATION

American Healthcare Radiology Administrators, 490-B Boston Post Rd., Suite 101, Sudbury, MA 01776, (800) 334-2472, <http://www.ahraonline.org>

Commission on Accreditation of Allied Health Education Programs, 1361 Park St., Clearwater, FL 33756, (727) 210-2350, <http://www.caahep.org>

Joint Review Committee On Education in Radiologic Technology, 20 N. Wacker Dr., Suite 2850, Chicago, IL 60606-3182, (312) 704-5300, <http://www.jrcert.org>

Society of Diagnostic Medical Sonography, 2745 Dallas Parkway, Suite 350, Plano, TX 75093-8730, (800) 229-9506, <http://www.sdms.org>

Professional Licensing and Certification Unit, Texas Department of State Health Services MC-1982, 1100 West 49th St., Austin, TX 78756-3183, (512) 834-6628, <http://www.dshs.state.tx.us/plc>

For additional website sources, please refer to the Resource Index.

Radiologic Technologist / Technician

Registered Nurse

PANHANDLE

Average Wage
\$23.21

*Average Annual
Job Openings*
129

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
2,711	3,428

TEXAS

Average Wage
\$26.35

*Average Annual
Job Openings*
7,624

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
137,472	184,940

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
2,284,000	2,908,000

Female 93%
Minority 27%

EMPLOYMENT CODES

OES 32502

*O*NET* 29-1111.00
Registered Nurses

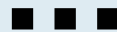
JOB DESCRIPTION

Care for ill, injured, convalescent, and disabled persons in hospitals, clinics, private homes, nursing facilities, and similar institutions. Assess and manage patient/client responses to actual and potential health care problems.



SKILLS AND APTITUDES NEEDED

- ◆ Should have a caring, sympathetic nature
- ◆ Must be emotionally stable to handle stress
- ◆ Ability to follow orders precisely
- ◆ Ability to accept responsibility
- ◆ Ability to direct or supervise others



Registered nurses (R.N.s) work to promote health, prevent disease, and help patients cope with illness. They are advocates and health educators for patients, families, and communities. When providing direct patient care, they observe, assess, and record symptoms, reactions, and progress; assist physicians during treatments and examinations; administer medication; and assist in convalescence and rehabilitation. R.N.s also develop and manage nursing care plans; instruct patients and their families in proper care; and help individuals and groups take steps to improve or maintain their health.

Most nurses in hospitals and nursing homes work a 40-hour week, but because patients need round-the-clock care, some work nights, weekends, and holidays. They often stand for long periods and help patients move in bed, stand, or walk. They are subject to back injuries when moving patients and shock from electrical equipment. Nurses may care for individuals with infectious diseases such as hepatitis. They must observe rigid guidelines to guard against dangers such as radiation, chemicals used for sterilization of instruments, and anesthetics.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S. (Associate in Applied Science Degree), Nursing - Associate Degree Nursing (ADN) Major
		√	A.S. (Associate in Science Degree), Nursing (Pre-Nursing) Major
Clarendon College Clarendon, Pampa		√	A.S. (Associate in Science Degree), Nursing Major
Frank Phillips College Borger, Perryton		√	Certificate of Completion (Nursing)
West Texas A&M University Canyon	√		B.S.N. (Bachelor of Science in Nursing Degree), Nursing Major

Licensed Vocational Nursing (LVN) Programs may articulate into Associate or Bachelor Degree Nursing Programs. Please refer to the LVN Occupational Profile in this handbook for Training Provider Information. For information on Panhandle Area private training providers or public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Required: Licensure by the State Board of Nurse Examiners

Required: Continuing education credits for licensure renewal

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

General Medical/Surgical Hospitals	68%	Elementary/Secondary Schools	4%
Physician's Offices	6%	Outpatient Care Centers	3%
Home Health Care Services	5%	Federal Government	2%
Nursing Care Facilities	4%	Colleges/Universities/Professional Schools	2%

FOR MORE INFORMATION

American Association of Colleges of Nursing, 1 Dupont Circle, NW, Suite 530, Washington, DC 20036, (202) 463-6930, <http://www.aacn.campusrn.com>

American Nurses Association (ANA) Nursing World, 8515 Georgia Ave., Suite 400, Silver Spring, MD 20910, (800) 274-4262, <http://www.nursingworld.org>

Board of Nurse Examiners for the State of Texas, 333 Guadalupe #3-460. Austin, TX 78701, (512) 305-7400, <http://www.bne.state.tx.us>

National League for Nursing, 61 Broadway, New York, NY 10006, (800) 669-1656, <http://www.nln.org>

Texas Nurses Association, 7600 Burnet Road, Suite 440, Austin, TX 78757, (512) 452-0645, <http://texasnurses.org>

For additional website sources, please refer to the Resource Index.

Registered Nurse

Respiratory Therapist

PANHANDLE

Average Wage
\$18.80

*Average Annual
Job Openings*
9

Employment in
2002 2012
122 167

TEXAS

Average Wage
\$20.72

*Average Annual
Job Openings*
453

Employment in
2002 2012
5,730 8,378

UNITED STATES

Employment in
2002 2012
86,000 116,000

Female 59%
Minority 33%

EMPLOYMENT CODES

OES 32302

*O*NET* 29-1126.00
Respiratory Therapists

JOB DESCRIPTION

Assess, treat, and care for patients with breathing disorders. Assume primary responsibility for all respiratory care modalities, including the supervision of respiratory therapy technicians. Initiate and conduct therapeutic procedures; maintain patient records; and select, assemble, check, and operate equipment.



SKILLS AND APTITUDES NEEDED

- ◆ Ability to pay attention to detail, follow instructions, and work as part of a team
- ◆ Ability to be sensitive to patients' physical and psychological needs
- ◆ Mechanical ability and manual dexterity to operate complicated equipment
- ◆ Knowledge in health, biology, mathematics, chemistry, and physics



Respiratory therapists treat all types of patients, ranging from premature infants whose lungs are not fully developed, to elderly people whose lungs are diseased. These workers provide temporary relief to patients with chronic asthma or emphysema, as well as emergency care to patients who are victims of a heart attack, stroke, drowning, or shock.

To evaluate patients, respiratory therapists test the capacity of the lungs and analyze oxygen and carbon dioxide concentration. They also measure the patient's potential of hydrogen (pH), which indicates the acidity or alkalinity level of the blood.

To treat patients, respiratory therapists use oxygen or oxygen mixtures, chest physiotherapy, and aerosol medications.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S. (Associate in Applied Science Degree), Respiratory Care Major

LICENSE/CERTIFICATION

Optional: National Board of Respiratory Care (NBRC) Certification and Registration as Registered Respiratory Therapist (RRT) or Certified Respiratory Therapist (CRT)

Required: State License to practice Respiratory Therapy
(License requires passing the CRT Exam)

Most employers require respiratory therapists to maintain a
Cardiopulmonary Resuscitation (CPR) Certification

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

General Medical/Surgical Hospitals	87%
Health Practitioner's Offices	5%
Nursing Care Facilities	2%
Physician's Offices	2%
Consumer Goods Rental	1%
Colleges/Universities/Professional Schools	1%
Federal Government	1%
Specialty Hospitals	1%

FOR MORE INFORMATION

American Association for Respiratory Care, 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706, (972) 243-2272, <http://www.aarc.org>

Committee on Accreditation for Respiratory Care, 1248 Harwood Rd., Bedford, TX 76021-4244, (817) 283-2835, <http://www.coarc.com>

The National Board for Respiratory Care, Inc., 8310 Nieman Rd., Lenexa, KS 66214-1579, (913) 599-4200, <http://www.nbrc.org>

For additional website sources, please refer to the Resource Index.

Respiratory Therapist

Surgical Technologist

PANHANDLE

Average Wage
\$16.29

*Average Annual
Job Openings*
5

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
119	152

TEXAS

Average Wage
\$16.67

*Average Annual
Job Openings*
289

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
5,660	7,809

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
72,000	92,000

Female 67%
Minority 39%

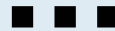
EMPLOYMENT CODES

OES 32928

*O*NET* 29-2055.00
Surgical Technologists

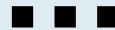
JOB DESCRIPTION

Assist operating room staff throughout surgical procedures by preparing the patient, equipment, and supplies; handing instruments to the surgeon, holding retractors, and cutting sutures. After the operation, they clean the operating room, sterilize equipment, and count all supplies and instruments.



SKILLS AND APTITUDES NEEDED

- ◆ Basic knowledge of chemistry, mathematics, anatomy, physiology, microbiology, pharmacology, professional ethics, and medical terminology
- ◆ Manual dexterity
- ◆ Must be conscientious, orderly, and emotionally stable to handle the demands of the operating room environment



Surgical technicians, also called surgical technologists, assist in operations under the supervision of surgeons, registered nurses, or other surgical personnel. Before an operation, technicians help set up the operating room with surgical instruments and equipment, sterile linens, and sterile solutions. They assemble, adjust, and check nonsterile equipment to ensure it is working properly. They prepare patients for surgery by washing, shaving, and disinfecting incision sites. They transport patients to the operating room, help position them on the operating table, and cover them with sterile surgical linens. They observe patients' vital signs, check charts, and help the surgical team scrub and put on gloves, gowns, and masks.

Technicians help prepare, care for, and dispose of specimens taken for laboratory analysis and may help apply dressings. Some operate sterilizers, lights, or suction machines, and help operate diagnostic equipment. They may also maintain supplies of fluid, such as plasma and blood. At times, they may be exposed to communicable diseases and unpleasant sights, odors, and materials.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct	Related	Education Offering
Academy of Professional Careers Amarillo		√	Medical Assisting Program
Amarillo College Amarillo, Dumas, Hereford	√		A.A.S. (Associate in Applied Science Degree) Surgical Technology Major
	√		Certificate of Completion (Surgical Technology)

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

General Medical/Surgical Hospitals	84%
Physician's Offices	5%
Outpatient Care Centers	5%
Specialty Hospitals	2%
Animal Production	1%
Dentist's Offices	1%
Health Practitioner's Offices	1%
Colleges/Universities/Professional Schools	1%

FOR MORE INFORMATION

Association of Surgical Technologists, 6 West Dry Creek Circle, Littleton, CO 80120, (800) 637-7433, <http://www.ast.org>

Liaison Council on Certification for the Surgical Technologist, 6 West Dry Creek Circle, Suite 100, Littleton, CO 80120, (800) 707-0057, <http://www.lcc-st.org>

For additional website sources, please refer to the Resource Index.

Surgical Technologist

Teacher, Elementary School

PANHANDLE

Average Wage

\$18.25

Average Annual

Job Openings

107

Employment in

2002 2012

2,464 2,998

TEXAS

Average Wage

\$20.08

Average Annual

Job Openings

6,556

Employment in

2002 2012

123,870 162,089

UNITED STATES

Employment in

2002 2012

1,467,000 1,690,000

Female **81%**

Minority **26%**

EMPLOYMENT CODES

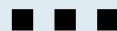
OES 31305

O*NET 25-2021.00

*Elementary School Teachers,
Except Special Education*

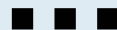
JOB DESCRIPTION

Teach elementary pupils in public or private schools basic academic, social, and other formative skills; maintain order and discipline in the classroom and on the playground; and discuss pupils' academic progress with parents.



SKILLS AND APTITUDES NEEDED

- ◆ Ability to communicate clearly
- ◆ Ability to inspire trust, confidence
- ◆ Ability to motivate students and understand their educational and emotional needs
- ◆ Be organized, dependable, patient, and creative



Elementary teachers must be able to recognize and respond to individual differences in students, and employ different teaching methods that will result in higher student achievement. They prepare a teaching outline for the course of study and prepare, administer, grade and record tests for their students.

Most elementary teachers instruct one class of children in several subjects. In some schools, two or more teachers work as a team and are jointly responsible for a group of students in at least one subject. In other schools, a teacher may teach one subject to a number of classes, such as music, art, reading, science, math, or physical education. A small number of teachers instruct multilevel classrooms, with students at several different learning levels.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo, Dumas, Hereford		√	A.A. (Associate of Arts Degree), General Studies Major-Education Degree Plan
Clarendon College Clarendon, Pampa		√	A.A. (Associate of Arts Degree), Elementary Education (4-8) Major
Wayland Baptist University Amarillo	√		B.S.I.S. (Bachelor of Science in Interdisciplinary Studies Degree) Major (Teaching Field) Elementary/Middle School Education Certification
	√		B.A. (Bachelor of Arts Degree) Major (Teaching Field) - Middle School Education Certification
West Texas A&M University Canyon	√		B.S. (Bachelor of Science Degree) Interdisciplinary Studies Major (EC-4 and 4-8 Certification)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Required: Texas Teacher Certification (may be optional for private school teachers)

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Elementary/Secondary Schools

99%

FOR MORE INFORMATION

American Federation of Teachers, 555 New Jersey Ave. NW, Washington, DC 20001, (202) 879-4400, <http://www.aft.org>

Education Resources Information Center (ERIC), 4483-A Forbes Blvd., Lanham, MD 20706, (800) 538-3742, <http://www.eric.ed.gov>

National Board for Professional Teaching Standards, 1525 Wilson Blvd., Suite 500, Arlington, VA 22209, (800) 228-3224, <http://www.nbpts.org>

National Education Association, 1201 16th St. NW, Washington, DC 20036, (202) 833-4000, <http://www.nea.org>

Texas Education Agency, 1701 N. Congress Ave., Austin, TX 78701-1494, (512) 463-9734, <http://www.tea.state.tx.us>

Texas State Teachers Association, 316 W. 12th St., Austin, TX 78701, toll free (877) 275-8782, <http://www.tsta.org>

For additional website sources, please refer to the Resource Index.

Teacher, Elementary School

Teacher, Secondary School

PANHANDLE

Average Wage
\$19.19

*Average Annual
Job Openings*
86

Employment in
2002 2012
1,622 2,025

TEXAS

Average Wage
\$21.29

*Average Annual
Job Openings*
5,129

Employment in
2002 2012
81,622 109,943

UNITED STATES

Employment in
2002 2012
988,000 1,167,000

Female 62%
Minority 20%

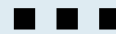
EMPLOYMENT CODES

OES 31308

*O*NET* 25-2031.00
*Secondary School Teachers,
Except Special
and Vocational Education*

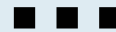
JOB DESCRIPTION

Instruct students in public or private schools in one or more subjects, such as English, mathematics, or social studies. May oversee study halls and homerooms and supervise extracurricular activities.



SKILLS AND APTITUDES NEEDED

- ◆ Ability to communicate clearly
- ◆ Ability to inspire trust, confidence
- ◆ Ability to motivate students
- ◆ Be organized, dependable, patient, and creative



Secondary school teachers instruct students in the subjects introduced in elementary school, but at a higher level of knowledge. Secondary teachers specialize in a specific subject, such as English, Spanish, mathematics, history, or biology. They may use films, slides, overhead projectors, and the latest technology in teaching, including computers, telecommunication systems, and video discs. Use of computer resources, such as educational software and the Internet, exposes students to a vast range of experiences and promotes interactive learning.

Teachers plan, evaluate, and assign lessons; prepare, administer, and grade tests; listen to oral presentations; and maintain classroom discipline. In many schools, teachers are increasingly involved in making decisions regarding the budget, personnel, textbook choices, curriculum design, and teaching methods.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo, Dumas, Hereford		√	A.A. (Associate of Arts Degree), General Studies Major-Education Degree Plan
Clarendon College Clarendon, Pampa		√	A.A. (Associate of Arts Degree), Secondary Education Major
Wayland Baptist University Amarillo	√		Teacher Certification (EC-12) Major: Teaching Content with BS, BA, or BM option
	√		Teacher Certification (8-12) Major: Teaching Content with BS, BA, or BBA option
West Texas A&M University Canyon	√		Teacher Certification (EC-12) Major: Teaching Content with BS, BA, or BM option
	√		Teacher Certification (8-12) Major: Teaching Content with BS, BA, or BBA option

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Required: Texas Teacher Certification (may be optional for private school teachers)

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Elementary/Secondary Schools

100%

FOR MORE INFORMATION

American Federation of Teachers, 555 New Jersey Ave. NW, Washington, DC 20001, (202) 879-4400, <http://www.aft.org>

Education Resources Information Center (ERIC), 4483-A Forbes Blvd., Lanham, MD 20706, (800) 538-3742, <http://www.eric.ed.gov>

National Board for Professional Teaching Standards, 1525 Wilson Blvd., Suite 500, Arlington, VA 22209, (800) 228-3224, <http://www.nbpts.org>

National Education Association, 1201 16th St. NW, Washington, DC 20036, (202) 833-4000, <http://www.nea.org>

Texas Education Agency, 1701 N. Congress Ave., Austin, TX 78701-1494, (512) 463-9734, <http://www.tea.state.tx.us>

Texas State Teachers Association, 316 W. 12th St., Austin, TX 78701, toll free (877) 275-8782, <http://www.tsta.org>

For additional website sources, please refer to the Resource Index.

Teacher, Secondary School

Teacher, Special Education

PANHANDLE

Average Wage
\$18.32

*Average Annual
Job Openings*
16

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
251	346

TEXAS

Average Wage
\$20.63

*Average Annual
Job Openings*
915

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
12,653	18,784

UNITED STATES

Employment in
2000
211,240

Female 81%
Minority 27%

EMPLOYMENT CODES

OES 31311

O*NET 25-2041.00
*Special Education Teachers,
Preschool, Kindergarten and
Elementary School*

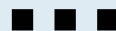
JOB DESCRIPTION

Teach elementary and secondary school subjects to educationally and physically handicapped students. Includes teachers who specialize and work with audibly and visually handicapped students and those who teach basic academic and life processes skills to the mentally retarded.



SKILLS AND APTITUDES NEEDED

- ◆ Ability to communicate clearly
- ◆ Acceptance of differences in others, patience
- ◆ Ability to motivate students, understanding special needs
- ◆ Creativity to apply different types of teaching methods to reach students who are having difficulty



Special education teachers work with children and youths who have a variety of disabilities. The various types of disabilities delineated in Federal legislation concerning special education programs include specific learning disabilities, speech or language impairments, mental retardation, emotional disturbance, multiple disabilities, hearing impairments, orthopedic impairments, other health impairments, visual impairments, autism, deaf-blindness, and traumatic brain injury. Students are classified under one of the categories, and special education teachers are prepared to work with specific groups.

Depending on the disability, teaching methods can include individualized instruction, problem-solving assignments, and group or individual work. Teachers are legally required to help develop an Individualized Education Program (IEP) for each student. The IEP sets personalized goals for each student and is tailored to a student's individual learning style and ability. The program includes a transition plan outlining specific steps to prepare the student for additional schooling or a job. Teachers work closely with parents to inform them of their child's progress and suggest techniques to promote learning at home.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo, Dumas, Hereford		√	A.A. (Associate of Arts Degree), General Studies Major-Education Degree Plan
Clarendon College Clarendon, Pampa		√	A.A. (Associate of Arts Degree), Secondary Education Major
Wayland Baptist University Amarillo		√	Teacher Certification (EC-12) Major: Teaching Content with BS, BA, or BM option
West Texas A&M University Canyon	√		Teacher Certification (EC-12) Major: Teaching Content (Special Education) with BS, BA, or BM option
	√		M.Ed. (Master of Education Degree), Special Education Major

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Required: Texas Teacher Certification (may be optional for private school teachers)

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Elementary/Secondary Schools	99%
State Government	1%

FOR MORE INFORMATION

American Federation of Teachers, 555 New Jersey Ave. NW, Washington, DC 20001, (202) 879-4400, <http://www.aft.org>

Education Resources Information Center (ERIC), 4483-A Forbes Blvd., Lanham, MD 20706, (800) 538-3742, <http://www.eric.ed.gov>

National Board for Professional Teaching Standards, 1525 Wilson Blvd., Suite 500, Arlington, VA 22209, (800) 228-3224, <http://www.nbpts.org>

National Education Association, 1201 16th St. NW, Washington, DC 20036, (202) 833-4000, <http://www.nea.org>

Texas Education Agency, 1701 N. Congress Ave., Austin, TX 78701-1494, (512) 463-9734, <http://www.tea.state.tx.us>

Texas State Teachers Association, 316 W. 12th St., Austin, TX 78701, toll free (877) 275-8782, <http://www.tsta.org>

For additional website sources, please refer to the Resource Index.

Teacher, Special Education

Truck Driver, Heavy and Tractor-Trailer

PANHANDLE

Average Wage
\$15.33

*Average Annual
Job Openings*
71

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
2,939	3,171

TEXAS

Average Wage
\$15.97

*Average Annual
Job Openings*
4,382

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
126,682	149,814

UNITED STATES

<i>Employment in</i>	
<i>2002</i>	<i>2012</i>
1,767,000	2,104,000

Female 6%
Minority 43%

EMPLOYMENT CODES

OES 97102

*O*NET 53-3032.01*
*Truck Drivers,
Heavy & Tractor-Trailer*

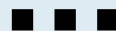
JOB DESCRIPTION

Drive tractor-trailer combination or truck with a capacity of at least three tons to transport and deliver goods, livestock, or materials in liquid, loose, or packaged form. May be required to unload truck.



SKILLS AND APTITUDES NEEDED

- ◆ At least 18 years old to drive trucks within State borders and at least 21 years old for interstate commerce
- ◆ Mechanical aptitude
- ◆ Good hearing and vision
- ◆ Normal use of arms and legs and normal blood pressure
- ◆ Cannot use any controlled substances unless prescribed by a physician
- ◆ Ability to read and speak English well enough to read road signs, prepare reports, and communicate with law enforcement officers and the public
- ◆ Self-motivation and ability to work with little supervision



Local truck drivers may provide daily service for a specific route, while other drivers make intercity and interstate deliveries that take longer and may vary from job to job. Produce truckers usually pick up a loaded truck early in the morning and spend the rest of the day delivering produce to many different grocery stores. Lumber truck drivers make several trips from the lumber yard to one or more construction sites. Gasoline tank truck drivers attach the hoses and operate the pumps on their trucks to transfer the gasoline to gas stations' storage tanks.

Long haul truck drivers may haul loads from city to city for a week or more before returning home. Some companies use two drivers on very long runs—one drives while the other sleeps in a berth behind the cab. "Sleeper" runs may last for days, or even weeks, usually with the truck stopping only for fuel, food, loading, and unloading.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Truck Driving Academy Amarillo	√		Certificate of Completion (Professional Truck Operations)
Amarillo College Amarillo		√	Certificate of Completion (Diesel Mechanics Technology) Diesel Technician

For information on Panhandle Area private training providers or public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Required: Texas Class "A" Commercial Driver's License (CDL) with all endorsements

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

General Freight Trucking	30%
Self-employed/Unpaid Family Workers	12%
Specialized Freight Trucking	11%
Grocery/Related Product Wholesalers	5%
Animal Production	5%
Cement/Concrete Product Manufacturing	3%
Petroleum/Petroleum Products Merchant Wholesalers	3%
Mining Support Activities	3%

FOR MORE INFORMATION

American Trucking Associations, 2200 Mill Rd., Alexandria, VA 22314, (703) 838-1700, website <http://www.truckline.com>

Professional Truck Driver Institute, Inc., 2200 Mill Rd., Alexandria, VA 22314, (703) 838-8842, website <http://www.ptdi.org>

For additional website sources, please refer to the Resource Index.

Truck Driver, Heavy and Tractor-Trailer

Welder, Cutter, Solderer and Brazier

PANHANDLE

Average Wage
\$13.25

*Average Annual
Job Openings*
27

Employment in
2002 2012
714 786

TEXAS

Average Wage
\$14.27

*Average Annual
Job Openings*
1,779

Employment in
2002 2012
41,043 47,241

UNITED STATES

Employment in
2002 2012
391,000 457,000

Female 2%
Minority 45%

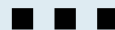
EMPLOYMENT CODES

OES 93914

O*NET 51-4121.02
*Welders, Cutters,
Solderers, and Brazers*

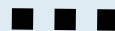
JOB DESCRIPTION

Use hand-welding and flame-cutting equipment, such as arc welders, gas welders, and gas torches, to weld together metal components of such products as pipelines, automobiles, boilers, and ships; to join together components of fabricated sheet metal assemblies; or to cut, trim, or scarf metal objects to dimensions, as specified by layout, work orders, or blueprints.



SKILLS AND APTITUDES NEEDED

- ◆ Basic knowledge of blueprint reading, computers, shop mathematics, mechanical drawing, physics, chemistry, and metallurgy
- ◆ Ability to concentrate on detailed work for long periods
- ◆ Ability to bend, stoop, and work in awkward positions
- ◆ Willingness to receive training and perform tasks in other production jobs
- ◆ Good eyesight, hand-eye coordination, manual dexterity



Welding is the most common way of permanently joining metal parts. In this process, heat is applied to metal pieces, melting and fusing them to form a permanent bond. Because of its strength, welding is used in shipbuilding, automobile manufacturing and repair, aerospace applications, and other manufactured products. Welding is also used to join beams when constructing buildings, bridges, and other structures, and to join pipes in pipelines, power plants, and refineries. Welders may perform manual welding, in which the work is entirely controlled by the welder, or semi-automatic welding, in which the welder uses machinery, such as a wire feeder, to help perform welding tasks.

The work of arc, plasma, and flame cutters is closely related to that of welders. However, instead of joining metals, cutters use the heat from the burning gases or an electric arc to cut and trim metal objects to specific dimensions. Cutters also dismantle large objects, such as ships, railroad cars, automobiles, or aircraft.

PANHANDLE AREA PUBLIC TRAINING PROVIDERS

Training Provider	Direct Training	Related Training	Education Offering
Amarillo College Amarillo	√		Certificate of Completion (Welding Technology-Basic Welding)
	√		Certificate of Completion (Welding Technology-Advanced Welding)
Frank Phillips College Borger	√		Certificate of Completion (Welding Technology)

For information on public training providers outside of the Panhandle Area, please refer to the Resource Index.

LICENSE/CERTIFICATION

Optional: Certifications for each specific welding procedure are overseen by welding inspectors at various examining institutions and testing labs.

HIGHEST EMPLOYMENT LEVELS BY INDUSTRY

Fabricated Metal Product Manufacturing	17%
Commercial/Industrial Machinery & Equipment	13%
Agriculture/Construction/Mining Machinery Manufacturing	8%
Natural Gas Distribution	5%
Mining Support Activities	5%
Self-employed/Unpaid Family Workers	4%
Nonresidential Building Construction	4%
Architectural/Structural Metals	4%

FOR MORE INFORMATION

American Welding Society, 550 N.W. Lejeune Rd., Miami, FL 33126, (800) 443-9353, website <http://www.aws.org>

For additional website sources, please refer to the Resource Index.

Welder, Cutter, Solderer and Brazer