



INDUSTRY-BASED CERTIFICATIONS

FOR MIDDLE-SKILL STEM OCCUPATIONS IN TEXAS

Texas Workforce Investment Council
November 2018

The Mission of the Texas Workforce Investment Council

Assisting the Governor and the Legislature with strategic planning for and evaluation of the Texas workforce system to promote the development of a well-educated, highly skilled workforce for Texas.

INDUSTRY-BASED CERTIFICATIONS FOR MIDDLE-SKILL STEM OCCUPATIONS IN TEXAS

TEXAS WORKFORCE INVESTMENT COUNCIL
NOVEMBER 2018

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OVERVIEW

In the modern labor market, there is an increasing role for third-party, industry-based certifications. Research conducted by the Texas Workforce Investment Council (Council) defined industry-based certifications as being industry-recognized, third-party assessed, and nationally portable credentials. Council research also found that many middle-skill science, technology, engineering, and math (STEM) occupations, which require education and training beyond high school but less than a four-year degree, are not only in-demand, but often provide higher wages compared to non-STEM jobs with similar educational requirements. These middle-skill STEM occupations are a critical segment of the workforce. Projected job growth in these occupations suggests that students who enter education and workforce training programs that result in an employer-valued credential, such as an industry-based certification or licensure, benefit from stronger employment.

In 2016, the Council launched a workforce system initiative to identify and track third-party, industry-based certifications for middle-skill STEM occupations. The overarching goal is to increase the workforce system's capacity to produce workers with an industry-valued credential for occupations that are growing in the state. While registered apprenticeships can be considered one of the original industry-based certifications, they are not included in the scope of this report.

This initial research has been a first pass at collecting information from employers about the certifications they value. A more robust process is being planned for the future that will engage more employers to assist in validating industry-based certifications. This initial list of certifications is intended to serve as a resource for Texas employers, local workforce boards, economic development groups, and educational entities such as community and technical colleges.

The Council welcomes feedback on the list of industry-based certifications included in this report. If you know of a third-party, industry-based certification for a middle-skill STEM occupation that employers value that is not on the list, and would like it to be considered in the future, please forward the following information to MSSOIBCfeedback@gov.texas.gov:

- a) Name of certification
- b) Name of certifying entity
- c) Middle-skill STEM occupation for which the industry-based certification is relevant

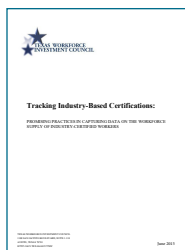
TEXAS WORKFORCE INVESTMENT COUNCIL

In *The Texas Workforce System Strategic Plan FY 2016–2023*, the Council identified three core competencies that must be strengthened across the system to respond to changing market conditions and the needs of workforce system customers. The core competencies include customer service and satisfaction, data-driven program improvement, and continuous improvement and innovation. The Council endorsed an approach at its February 2016 meeting to manage a series of strategic system initiatives to support development of these core competencies. This first initiative is based on research regarding the demand for middle-skill STEM workers and the increasing use of industry-based certifications, which will assist five of eight of the Council's workforce system partner agencies that identified industry-based certifications as a priority in the system strategic plan.

INDUSTRY-BASED CERTIFICATION IDENTIFICATION

The Council documented its extensive preliminary research by way of reports that were definitional in nature. The reports defined third-party, industry-based certifications; defined and identified middle-skill STEM occupations for Texas; and linked those occupations with the associated certifications. Following feedback on value from Texas employers, the list of certifications included in this report is constructed in two parts: one, IT-related, and two, all other certifications.

DEFINING AN INDUSTRY-BASED CERTIFICATION



A certification is a type of nontraditional award to an individual that demonstrates proficiency and knowledge, through examination, in a specific industry, occupation, or trade. As opposed to a certificate, which is an educational credential, obtaining a certification is not dependent on any actual education or training program. Candidates for certification are evaluated by independent, third-party professional and industry-based groups. These national organizations develop and maintain relevant proficiency standards that are assessed and sanctioned by industry-approved examination

facilities, independent of any educational institution or training program. Furthermore, certification expiration dates often require individuals to participate in continuing education or reexamination. This characterization of certifications has been accepted and endorsed by national entities, such as the National Association of Manufacturers, the Manufacturing Skill Standards Council, and the National Institute for Precision Metalworking.

Therefore, the Council defined an industry-based certification as *“a credential that is assessed by an independent, third-party certifying entity using predetermined standards for knowledge, skills, and competencies, resulting in a time-limited award that is nationally recognized and applicable to a specific occupation.”* Before work could begin to develop a system to track industry-based certification outcomes of education and training programs, the Council recognized that the state must identify those certifications that provide value to employers in Texas, particularly in the hiring process.

IDENTIFYING MIDDLE-SKILL STEM OCCUPATIONS



The Council began this process by first establishing a definition of middle-skill occupations and STEM occupations. There is no national agreement on which occupations are STEM occupations. An examination of employment statistics illustrated the difficult task of classifying and quantifying STEM occupations. Generally, STEM jobs have been identified as occupations in the fields of science, technology, engineering, and mathematics that require a four-year degree or higher. These high-skill jobs usually include industries ranging from advanced technology to research-oriented professions.

However, as industries continue to evolve, many occupations once considered non-STEM now require STEM-oriented skills and knowledge. The lack of a consensus definition of STEM has been problematic and created workforce analyses that vary considerably.

Based on Standard Occupational Classification (SOC) detailed occupation codes, STEM-classified occupations were determined from 11 different sources from nine federal, state, and institutional

organizations. Each source considered a different number of occupations as STEM. In all, 257 out of 840 detailed SOC occupations were identified as STEM by at least one of the 11 sources.

Based on the identified STEM occupations, a list of middle-skill STEM occupations was constructed using federal Bureau of Labor Statistics designations regarding typical education and training levels. From the list of occupations identified as STEM, 85 were identified as middle-skill STEM occupations.

The final step in this research generated a list of middle-skill STEM occupations important to the Texas economy. In addition to the list of 85 middle-skill STEM occupations, an additional 12 middle-skill classified jobs were identified and incorporated into the list. While these additional occupations were not considered STEM by any of the original 11 sources, they require substantial STEM-related skills and knowledge. Thus, a total of 97 middle-skill STEM occupations were identified for the state of Texas.

GATHERING EMPLOYER FEEDBACK

A Council-convened task group worked to develop an efficient, effective, and replicable process to engage employers and solicit feedback on industry-based certifications. After extensive analysis of labor market data and information, the task group determined that employers were the only source of information on the value of middle-skill STEM industry-based certifications. The task group recommended that the Council work with local workforce boards to engage employers to provide feedback on the list of middle-skill STEM industry-based certifications. It further recommended that regional profiles of middle-skill STEM occupations and certifications be constructed for each region through data analysis and information collected from local workforce board plans.

The process to assign regional occupations and certifications to local boards for employer feedback began with creating a planning matrix based on the Council's middle-skill STEM occupations list and the 28 local workforce development areas. Council staff then matched the middle-skill STEM occupations with target and in-demand occupations identified in each of the 28 board plans. Occupations were apportioned to boards using random assignment. Next, Council staff prepared a customized profile for each workforce development area, creating employer feedback forms for each assigned middle-skill STEM occupation and its associated industry-based certifications.



INDUSTRY-BASED CERTIFICATIONS THAT ARE VALUABLE TO EMPLOYERS

Recognizing that regional labor markets vary considerably, the task group determined that refining a list of certifications should result from direct feedback from employers at the regional level. This feedback was based upon an informed review of the list to determine employer awareness of and value placed on certifications that support employment outcomes in the middle-skill STEM occupations in their regions. Local workforce boards engaged employers in local workforce development areas in early 2018 and had the flexibility to choose any process that would work most effectively to achieve the goals of the employer feedback process.

The goal of gathering feedback was to engage employers in a collaborative process with workforce system partners to determine the third-party, industry-based certifications that employers recognize and value—that is, to identify the certifications that would result in a positive difference or outcome for a job

applicant. For the industry-based certifications contained in this report, employers' feedback indicated that the certification would make a positive impact in the hiring process, where—given equal skill, education, and experience—one candidate possessed the certification and the other did not.

CONCLUSION

The Texas labor market is changing. STEM occupations that require education and training beyond high school but less than a four-year degree are increasingly in demand and provide higher wages compared to non-STEM jobs with similar educational requirements. The Council's research indicates that these middle-skill STEM occupations are a critical segment of the workforce. Students who enter education and workforce training programs that result in a marketable credential, such as an industry-based certification or licensure, benefit from stronger employment outcomes. The Council anticipates that this current industry-based certification data will help inform local workforce boards, employers, community colleges, and other sub-baccalaureate education and training programs. This information can be used to inform policy changes, adjust training and education content, and assist in planning for the workforce of the future.

INDUSTRY-BASED CERTIFICATIONS FOR MIDDLE-SKILL STEM OCCUPATIONS: PART ONE

The diagram below explains how to read the list of industry-based certifications for middle-skill STEM occupations on the following pages. Occupations are listed in alphabetical order.

The left column contains the name of the middle-skill STEM occupation in bold print, followed by the standard occupation code (SOC) and the number of Texas workers in this occupation in 2016.

The center column contains labor market data for each middle-skill STEM occupation. The first number is the projected employment by 2026. The second number is the projected change in employment. The third number is the 2017 median annual wage for the occupation.

MIDDLE-SKILL STEM OCCUPATIONS	INDUSTRY-BASED CERTIFICATIONS
Aerospace Engineering and Operations Technician SOC 17-3021 1,180 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage	Aerospace Manufacturing Certification Certified Aerospace Technician
Animal Breeder SOC 45-2021 460 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage	Licensed Breeder
Automotive Service Technician and Mechanic SOC 49-3023 54,140 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage	Automobile Service Consultant Automobile Technician: Automatic Transmission/Transaxle Automobile Technician: Brakes Automobile Technician: Electrical/Electronic Systems Automobile Technician: Engine Performance Automobile Technician: Engine Repair Automobile Technician: Heating and Air Conditioning Automobile Technician: Manual Drive Train and Axles Automobile Technician: Service Consultant Automobile Technician: Suspension and Steering Automobile Technician - Light Vehicle Diesel Engines (A9) Automobile Service Technology Auto Maintenance and Light Repair Collision Repair and Refinish: Mechanical and Electrical Components Collision Repair and Refinish: Structural Analysis and Damage Repair Medium/Heavy Truck Technician: Brakes Medium/Heavy Truck Technician: Diesel Engines Medium/Heavy Truck Technician: Drive Trains Medium/Heavy Truck Technician: Electrical/Electronic Systems Medium/Heavy Truck Technician: Heating, Ventilation, & A/C Medium/Heavy Truck Technician: Suspension and Steering
Avionics Technician SOC 49-2091 1,860 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage	Electronics Technician
Cardiovascular Technologist and Technician SOC 29-3031 5,200 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage	Certified Cardiographic Technician Certified ECG Technician Certified EKG Technician
Computer-Controlled Machine Tool Operator, Metal and Plastic SOC 51-4011 10,580 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage	Machine Building Levels II, III Mechanical Assembly ISA Certified Control Systems Technician
Computer Numerically Controlled Machine Tool Programmer SOC 51-4012 1,670 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage	CNC Milling Skills Levels II, III, Operations Job Planning, Benchwork and Layout Measurement, Materials and Safety Metalforming Level 1
Dental Assistant SOC 31-9091 28,420 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage	

The right column contains the industry-based certifications associated with the corresponding middle-skill STEM occupation in the left column.

MIDDLE-SKILL STEM OCCUPATIONS

INDUSTRY-BASED CERTIFICATIONS

Aerospace Engineering and Operations Technician

SOC 17-3021 | 1,180 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

1,360
 14.8%
 \$60,365

Aerospace Manufacturing Certification
 Certified Aerospace Technician

Animal Breeder

SOC 45-2021 | 460 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

520
 13.9%
 \$48,498

Licensed Breeder

Automotive Service Technician and Mechanic

SOC 49-3023 | 54,140 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

61,820
 14.2%
 \$39,773

Automobile Service Consultant
 Automobile Technician: Automatic Transmission/Transaxle
 Automobile Technician: Brakes
 Automobile Technician: Electrical/Electronic Systems
 Automobile Technician: Engine Performance
 Automobile Technician: Engine Repair
 Automobile Technician: Heating and Air Conditioning
 Automobile Technician: Manual Drive Train and Axles
 Automobile Technician: Service Consultant
 Automobile Technician: Suspension and Steering
 Automobile Technician - Light Vehicle Diesel Engines (A9)
 Automobile Service Technology
 Auto Maintenance and Light Repair
 Collision Repair and Refinish: Mechanical and Electrical Components
 Collision Repair and Refinish: Structural Analysis and Damage Repair
 Medium/Heavy Truck Technician: Brakes
 Medium/Heavy Truck Technician: Diesel Engines
 Medium/Heavy Truck Technician: Drive Trains
 Medium/Heavy Truck Technician: Electrical/Electronic Systems
 Medium/Heavy Truck Technician: Heating, Ventilation, & A/C
 Medium/Heavy Truck Technician: Suspension and Steering

Avionics Technician

SOC 49-2091 | 1,860 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

2,030
 9.4%
 \$57,864

Electronics Technician

Cardiovascular Technologist and Technician

SOC 29-2031 | 5,200 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

6,290
 20.9%
 \$43,798

Certified Cardiographic Technician
 Certified ECG Technician
 Certified EKG Technician

Computer-Controlled Machine Tool Operator, Metal and Plastic

SOC 51-4011 | 10,580 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

12,160
 14.9%
 \$40,776

Machine Building Levels II, III Mechanical Assembly
 ISA Certified Control Systems Technician
 CNC Milling Skills Levels II, III, Operations
 Job Planning, Benchwork and Layout
 Measurement, Materials and Safety
 Metalforming Level 1

Computer Numerically Controlled Machine Tool Programmer

SOC 51-4012 | 1,670 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

2,230
 33.8%
 \$53,087

CNC Turning Levels II, III, Operations
 Slide Forming Levels II, III

Dental Assistant

SOC 31-9091 | 28,420 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

34,670
 22.0%
 \$35,028

Certified Dental Assistant

MIDDLE-SKILL STEM OCCUPATIONS

INDUSTRY-BASED CERTIFICATIONS

Dental Hygienist

SOC 29-2021 | 12,530 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

15,260
 21.8%
 \$74,477

Licensed Dental Hygienist

Dental Laboratory Technician

SOC 51-9081 | 2,310 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

2,720
 17.7%
 \$36,767

Certified Dental Technician

Diagnostic Medical Sonographer

SOC 29-2032 | 5,230 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

7,040
 34.6%
 \$71,801

Registered Technologist - Computed Tomography
 Registered Technologist - Radiography
 Registered Technologist - Vascular Sonography
 Registered Technologist - Vascular-Interventional Radiography
 Registered Vascular Technology
 Registered Technologist - Mammography
 Registered Technologist - Sonography
 Registered Diagnostic Medical Sonographer - Abdomen
 Registered Diagnostic Medical Sonographer - Obstetrics and Gynecology
 Registered Technologist - Nuclear Medicine Technology

Dietetic Technician

SOC 29-2051 | 2,880 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

3,360
 16.7%
 \$23,462

Licensed Dietetic Technician

Electrical and Electronic Engineering Technician

SOC 17-3023 | 15,110 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

16,800
 11.2%
 \$65,228

Electrical, Level I
 Electronic Systems Technician, Level I

Electrician

SOC 47-2111 | 61,480 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

72,110
 17.3%
 \$47,382

Licensed Electrician

Electronic Home Entertainment Equipment Installer, Repairer

SOC 49-2097 | 2,190 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

2,540
 16.3%
 \$29,216

Certified Electronic Systems Technician
 Certified Engineering Technician - Audio Systems
 Certified Electronics Systems Associate
 Wireless Systems Installer Technician

Emergency Medical Technician and Paramedic

SOC 29-2041 | 18,720 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

22,400
 19.7%
 \$34,429

Licensed Paramedic

Hearing Aid Specialist

SOC 29-2092 | 410 workers
 Projected employment by 2026
 Projected employment increase 2016-2026
 2017 median annual wage

520
 25.5%
 \$45,494

Licensed Hearing Instrument Fitter and Dispenser

MIDDLE-SKILL STEM OCCUPATIONS

INDUSTRY-BASED CERTIFICATIONS

Licensed Practical and Licensed Vocational Nurse

SOC 29-2061 | 71,430 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

85,030

19.0%

\$45,394

Licensed Vocational Nurse

Magnetic Resonance Imaging Technologist

SOC 29-2035 | 2,790 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

3,460

24.0%

\$70,350

Registered Technologist - Cardiac-Interventional Radiography

Magnetic Resonance Imaging Technologist

Registered Technologist - Magnetic Resonance Imaging

Registered Technologist - Computed Tomography

Manufacturing Production Technician

SOC 17-3029 | 7,670 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

8,810

14.9%

\$60,513

Certified Logistics Associate

Certified Logistics Technician

Certified Production Technician

Mechanical Engineering Technician

SOC 17-3027 | 4,860 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

5,710

17.4%

\$63,232

Certified Quality Technician

Medical and Clinical Laboratory Technician

SOC 29-2012 | 11,890 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

14,320

20.4%

\$49,776

Certified Safety Professional

International Medical Technologist

Medical Laboratory Technician

Medical Laboratory Technician

Medical Lab Assistant

Phlebotomy Technician

Medical Assistant

SOC 31-9092 | 58,570 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

79,530

35.8%

\$30,379

Clinical Medical Assistant

Nuclear Medicine Technologist

SOC 29-2033 | 1,350 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

1,640

21.5%

\$75,733

Licensed Medical Technologist

Occupational Therapy Assistant

SOC 31-2011 | 3,760 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

5,120

36.1%

\$70,808

Occupational Therapy Assistant: Driving and Community Mobility

Occupational Therapy Assistant: Environmental Modification

Occupational Therapy Assistant: Feeding, Eating, and Swallowing

MIDDLE-SKILL STEM OCCUPATIONS

INDUSTRY-BASED CERTIFICATIONS

Operating Engineer, Construction, and Equipment Operator

SOC 47-2073 36,830 workers	
Projected employment by 2026	44,450
Projected employment increase 2016-2026	20.7%
2017 median annual wage	\$38,371

Heavy Equipment Operator: Motor Grader
Heavy Equipment Operator: Roller
Industrial Maintenance Support Mechanic
Heavy Equipment Operator: Backhoe
Industrial Maintenance Mechanic
Heavy Equipment Operator Level One
Heavy Equipment Operator: Dozer
Heavy Equipment Operator: Dump Truck
Heavy Equipment Operator: Loader
Heavy Equipment Operator: Excavator
Heavy Equipment Operator: Forklift
Carpenter
Construction
HVAC Technician
Industrial Millwright
Industrial Pipefitter
Instrumentation Technician
Masonry
Plumber

Ophthalmic Medical Technician

SOC 29-2057 4,240 workers	
Projected employment by 2026	5,300
Projected employment increase 2016-2026	25.1%
2017 median annual wage	\$31,953

Certified Ophthalmic Technician

Pharmacy Technician

SOC 29-2052 32,900 workers	
Projected employment by 2026	39,900
Projected employment increase 2016-2026	21.3%
2017 median annual wage	\$32,915

Certified Pharmacy Technician

Physical Therapist Assistant

SOC 31-2021 6,850 workers	
Projected employment by 2026	9,400
Projected employment increase 2016-2026	37.3%
2017 median annual wage	\$69,240

Wound Care Certified
Functional Training Specialty Certification
Orthopedic Exercise Specialty Certification
Orthopaedic Technologist Certified
Certification in Orthopedic Manual Therapy
Occupational Therapist Registered

Radiologic Technologist

SOC 29-2034 15,900 workers	
Projected employment by 2026	19,530
Projected employment increase 2016-2026	22.8%
2017 median annual wage	\$57,245

Licensed Medical Radiologic Technologist

Registered Nurse

SOC 29-1141 210,780 workers	
Projected employment by 2026	261,610
Projected employment increase 2016-2026	24.1%
2017 median annual wage	\$70,733

Licensed Registered Nurse

Respiratory Therapist

SOC 29-1126 11,780 workers	
Projected employment by 2026	15,940
Projected employment increase 2016-2026	35.3%
2017 median annual wage	\$59,002

Licensed Respiratory Care Practitioner

Surgical Technologist

SOC 29-2055 10,870 workers	
Projected employment by 2026	13,130
Projected employment increase 2016-2026	20.8%
2017 median annual wage	\$47,129

Certified Surgical Technologist

MIDDLE-SKILL STEM OCCUPATIONS

INDUSTRY-BASED CERTIFICATIONS

Surveying and Mapping Technician

SOC 17-3031 | 8,210 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

10,060

22.5%

\$41,801

Highway Surveys - Level I

Highway Surveys - Level II

Highway Surveys - Level III

Highway Surveys - Level IV

Certified Surveyor Technician: Office Track Level II

Certified Surveyor Technician: Field Track Level III

Certified Surveyor Technician: Office Track Level III

Certified Survey Technician Level I

Certified Surveyor Technician: Field Track Level II

Traffic Technician

SOC 53-6041 | 420 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

490

16.5%

\$39,347

Traffic Control Specialist

Traffic Control Technician

Electronics in Traffic Signal Technician

Traffic Signal Bench Technician Level II

Traffic Signal Inspector Level I

Roadway Lighting Technician Level I

Traffic Signal Technician Level I

Transportation Inspector

SOC 53-6051 | 3,730 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

4,270

14.4%

\$79,317

Certified Safety Supervisor

Veterinary Assistant and Laboratory Animal Caretaker

SOC 31-9096 | 5,110 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

6,380

24.9%

\$23,635

Certified Veterinary Assistant

Veterinary Technologist and Technician

SOC 29-2056 | 9,290 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

11,650

25.5%

\$29,672

Licensed Veterinary Technician

Water and Wastewater Treatment Plant and System Operator

SOC 51-8031 | 10,320 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

10,840

5.0%

\$37,347

Licensed Wastewater Collection System Operators

Licensed Water System Operators

Welder, Cutter, Solderer, and Brazier

SOC 51-4121 | 54,410 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

64,160

17.9%

\$42,286

Structural Steel Welder

Sheet Metal Welder

INDUSTRY-BASED CERTIFICATIONS FOR MIDDLE-SKILL STEM OCCUPATIONS: PART TWO

The diagram below explains how to read the list of Information Technology (IT) related certifications on the following pages. IT functional areas are matched with corresponding certifying entities due to the vast number of vendor/product-based certifications.

The left column contains the name of the IT functional area in bold print, followed by the standard occupation code (SOC) and the number of Texas workers in this occupation in 2016.

The center column contains labor market data for each area. The first number is the projected employment by 2026. The second number is the projected change in employment. The third number is the 2017 median annual wage for the occupation.

IT FUNCTIONAL AREA	CERTIFYING ENTITY		
Business Analyst - Computer Systems Analyst SOC 15-1121 56,150 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage	41,260 14.8% \$115,257	IBM Corporation Oracle Corporation SAP America, Inc. World Organization of Webmasters	
Business Operations Manager SOC 11-9199 35,960 workers Projected employment by 2026	41,260 14.8% \$115,257	IBM Corporation SAP America, Inc. Oracle Corporation	
2017 median annual wage	16,360 16.5% \$35,512	Alcatel Apple Computer, Inc. Brocade Communications Systems, Inc. Computing Technology Industry Association (CompTIA)	
Graphic Designer SOC 27-1024 15,940 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage	17,970 12.8% \$46,417	Adobe Systems Incorporated Certified Internet Web Professionals	
Network Data/Analyst SOC 15-1141 11,810 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage	13,920 17.9% \$88,290	EC-Council Cisco Systems, Inc. Citrix Systems Incorporated Oracle Corporation	
Network Security SOC 15-1152 17,650 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage	20,180 14.3% \$68,286	IBM Corporation SAP America, Inc. Oracle Corporation	
Network Support - Computer Network Support Specialist SOC 15-1122 7,420 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage	9,900 33.5% \$92,626	Alcatel Apple Computer, Inc. Brocade Communications Systems, Inc. Certified Wireless Network Professional Cisco Systems, Inc. Citrix Systems Incorporated Computing Technology Industry Association (CompTIA) Hewlett Packard Certification and Learning IBM Corporation Juniper Networks Linux Professional Institute Microsoft Corporation Oracle Network Appliance, Inc. Network Professional Association	
Network Webmaster/Administrator SOC 15-1142 31,530 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage	35,700 13.3% \$86,170	World Organization of Webmasters Microsoft Corporation Oracle Corporation SAP America, Inc.	

The right column contains the product providers associated with the IT functional area in the left column.

IT FUNCTIONAL AREA

CERTIFYING ENTITY

Business Analyst - Computer Systems Analyst

SOC 15-1121|56,150 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

64,340

14.6%

\$88,945

IBM Corporation

Oracle Corporation

SAP America, Inc.

World Organization of Webmasters

Business Operations Manager

SOC 11-9199|35,960 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

41,260

14.8%

\$115,257

IBM Corporation

SAP America, Inc.

Oracle Corporation

Computer Repair

SOC 49-2011|14,050 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

16,360

16.5%

\$35,512

Alcatel

Apple Computer, Inc.

Brocade Communications Systems, Inc.

Computing Technology Industry Association (CompTIA)

Graphic Designer

SOC 27-1024|15,940 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

17,970

12.8%

\$46,417

Adobe Systems Incorporated

Certified Internet Web Professionals

Network Data/Analyst

SOC 15-1141|11,810 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

13,920

17.9%

\$88,290

EC-Council

Cisco Systems, Inc.

Citrix Systems Incorporated

Oracle Corporation

Network Security

SOC 15-1152|17,650 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

20,180

14.3%

\$68,286

ETA International

Global Information Assurance Certification

Cisco Systems, Inc.

Computing Technology Industry Association (CompTIA)

Network Support - Computer Network Support Specialist

SOC 15-1122|7,420 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

9,900

33.5%

\$92,626

Alcatel

Apple Computer, Inc.

Brocade Communications Systems, Inc.

Certified Wireless Network Professional

Cisco Systems, Inc.

Citrix Systems Incorporated

Computing Technology Industry Association (CompTIA)

Hewlett Packard Certification and Learning

IBM Corporation

Juniper Networks

Linux Professional Institute

Microsoft Corporation

Oracle

Network Appliance, Inc.

Network Professional Association

Network Webmaster/Administrator

SOC 15-1142|31,530 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

35,700

13.3%

\$86,170

World Organization of Webmasters

Microsoft Corporation

Oracle Corporation

SAP America, Inc.

IT FUNCTIONAL AREA

CERTIFYING ENTITY

Security Management Specialist - Information Security Analyst

SOC 15-1122 | 7,420 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

9,900

33.5%

\$92,626

Global Information Assurance Certification

Hewlett Packard Certification and Learning

IBM Corporation

International Information Systems Security Certification

Consortium, Inc.

Security Manager - Information Security Analyst

SOC 15-1122 | 7,420 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

9,900

33.5%

\$92,626

Hewlett Packard Certification and Learning

IBM Corporation

Security User Support, Cybersecurity - Information Security Analyst

SOC 15-1122 | 7,420 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

9,900

33.5%

\$92,626

Global Information Assurance Certification

RSA Security, Inc.

Symantec

Software Developer

SOC 15-1132 | 59,380 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

79,130

33.3%

\$107,722

Environmental Systems Research Institute

Hewlett Packard Certification and Learning

User Support - Computer User Support Specialist

SOC 15-1151 | 56,370 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

66,640

18.2%

\$49,428

Apple Computer, Inc.

Certified Wireless Network Professional

Computing Technology Industry Association (CompTIA)

Global Information Assurance Certification

ETA International

HDI

Hewlett Packard Certification and Learning

IBM Corporation

Institute for the Certification of Computing Professionals

Juniper Networks

Linux Professional Institute

Microsoft Corporation

Novell, Inc. - Education

Oracle Corporation

Web Developer

SOC 15-1134 | 10,130 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

12,100

19.5%

\$68,665

Adobe Systems Incorporated

Certified Internet Web Professionals

Webmaster/Administrator

SOC 15-1141 | 11,810 workers

Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

13,920

17.9%

\$88,290

Adobe Systems Incorporated

Certified Internet Web Professionals

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ACKNOWLEDGEMENTS

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Participating Texas Employers

1424 Bistro	Ballard Family Dentistry
287 Roadhouse	BASF
38th Street Pharmacy	Baylor Scott & White
A.E. Hiller & Son Inc.	Baytown Enterprise Products Operating
Abilene Advanced Eyecare	Becton, Dickinson and Company
Abilene Eye Institute	Bell Helicopter
AbiMar Foods, Inc.	Bella Vista Ranch
Ace Fire & Sound	Bells Family Drug
Advance Services	Benzer Partnership
Advanced Eyecare	Big Country Eye Center
Advanced Pain Care	Bite Rite Lab
AECOM	Blaine Larsen Farms
AES	Bluebonnet Health Service
Affordable Dentures & Implants	Bob Evans Foods
Air Liquid	Bo-Mac Contractors, LTD.
Air Products & Chemicals	Bonham Family Drug
Airforce Turbine Services	Bowen Electric Co.
Airways Labs	BPL Plasma
All Points Surveying, Inc.	Braums
Allen Samuels Dodge Chrysler Jeep Ram	Bridgestone Bandag
Alliance Aviation Services	Broadwind Tower & Heavy Fabrications
Allied Machine & Welding	Brookshire's (Pottsboro)
Allison Welding	Brown Electric
American Heating	Brownwood Regional Medical Center
American Industrial Machine	BSA Health System
American Rice	Budget Optical
American Standard	Burger King
American TV & Appliance	Bush's Chicken
America's Best Contacts & Eyeglasses	Buzzi Unicem USA
Amistad Ready Mix	C&J Energy
Angelo Automatic Gates	C&S Propeller
Angelo Eye Center	Caltech
Anthony P Heneger DDS PA	Camino Real Fuels, LLC
Anzco	Campbell Soup
Apex Systems	Capital Medical Clinic
Arise Austin Medical Center	Capital Prosthetics and Orthotics
Arkema	Capital School of Austin
Art Salinas Engineering	Cardenas Superstore
Ascension - Seton	Carl H. Malone
Atrium Nursing & Rehabilitation	Carrabbas
Austin Foot and Ankle Specialists	Carter Bloodcare
Austin Ocular Prosthetics	Casa Ole
Austin Prosthetic Center	Cattle Company of Texas
Austin Surveyors	Cave-Bowlin Inc. dba
AutoZone	CB&I
Balfour Beatty Construction	CDTS, Inc

Certified Safety Specialist LLC
 CFM Materials
 Chaparral Labs
 Charlie's Machine & Welding
 Chicken Express - College Station, Bryan
 Childress Regional Medical Center
 Christus - Sulphur Springs
 CIA&D
 Cinematic
 Citizens Medical Center
 City Machine & Welding
 City of Alice
 City of Alton
 City of Belton
 City of Carrizo Springs
 City of Crystal City
 City of Del Rio
 City of Edinburg
 City of Midland
 City of Mission
 City of Palmview
 City of Weslaco
 Coca-Cola Southwest Beverage
 Coddell Memorial Hospital
 Cogdell Hospital Snyder
 Comanche County Hospital
 Convergent Technologies
 Cornerstone Healthcare Group
 Corre Laboratories
 Coverlay Manufacturing
 Cowboy Gelato
 CPL - Gainesville
 CPL - Sherman
 Creative Solutions in Healthcare
 CS&D Technologies, LP.
 CSS Potato Farms
 Curtain Wall Design & Consulting
 CVQ Land Surveyors
 D&G Energy Corporation
 DanoneWave
 Dawson Geophysical
 Daybreak Community Service
 DeTar Healthcare System
 Divine Audio & Security
 Doctor's Hospital at Renaissance
 Dodd Surveying and Mapping
 Don Carlos
 Dougherty's Pharmacy
 Dr. Alan Larsen
 Dr. Larry Abernathy OD
 Drs. Comolli & Etheredge
 D-Tronic
 Dynamic Manufacturing Solutions
 E.I. DuPont

E.ON
 Eagle Dental Center
 East Texas Children's Dentistry
 Eaton Crouse-Hinds
 Ecolab
 Elbit Systems of America
 Ellwood Machining
 Endeavor Rehab Center
 Ener-Tel
 Executive Technical Services
 Eyemart Express
 Eyes of Texas
 Fabwright-Jackie
 Falls Community Hospital
 Family Vision
 Findley's Fountain - Pampa
 Floyd's Aero
 Forty Acres Pharmacy
 Fowler Eye Care
 Franklin Dentistry Assoc.
 Fusion Dental & Braces
 G&M Automotive & Speed Center
 Garcia's Used Parts
 GE Packaged Power
 GE Power
 General Electric International
 Genotox Laboratories, LTD
 Geonix Seismic
 Girling Health Care
 Golden Plains Community Hospital - Borger
 Goodier Cosmetics
 Goodyear Auto Service Center
 Grenta Machine
 Hallcon
 Hamilton Oilfield Services
 Hanger (Anderson Sq.)
 Harris Health
 Haskell Memorial Hospital
 Health Mart Pharmacy
 Health South
 Hemphill County Hospital District - Canadian, TX
 Hendrick Medical Center
 Hereford Nursing and Rehab
 Hereford Regional Med
 Heritage Parkway Pharmacy
 Hermes Music
 Hill Regional Hospital
 HKS
 Holt Carson, Inc.
 Home Care Assistance
 Huhtamaki
 Huntsman International
 Hydraulic Industrial Services
 IBEX Dental Technologies Inc

InfoMark formerly Sevren
 Integral Care
 Integrity Dental Ceramics
 Intertek
 Invenergy LLC.
 ISC Constructors
 Itani Dental Lab Inc.
 J&J Excavating & Materials
 Jacobs
 James Lovering DDS
 Janee Atkinson DDS
 JBS Five Rivers Cattle Feeding LLC- Hartley Feeders
 JDC Healthcare Management, LLC
 Jefferson County Courthouse
 Jefferson County Pct. #3 Road & Bridge
 Johnson & Collins Orthodontics
 Justin Crownover/Kay Crownover & Family & Lone
 Star Family Farms
 Karavel Wellness Center
 KAT Excavation & Construction, Inc.
 KBR
 Kelly West DDS
 Kimberly Clark
 King Surplus
 Kings Manor Methodist
 Klein Tools, Inc.
 Kleinfelder
 Knox County Hospital District
 Kohler Company
 Kuraray America Inc
 L3 Communications
 L3 Technologies
 LabCorp
 Laddie's Electric Co.
 Landmark Surveying, LP
 Leeward Renewable Energy
 Lens Crafters
 Leonard Pharmacy
 Lexine, Inc.
 Lockheed Martin
 Lone Star Opticians
 Luby's Port Arthur
 Ludlum Measurements, Inc.
 Lumatec Lighting Services
 Lyfe Tyme
 Lyndon Wells
 LZ Hay
 Magnolia Market
 Mario's Tire Repair
 Martin Marietta
 Maverick Civil & Survey, LLC
 Maverick County
 Maverick Welding
 Mayes Welding

McDonald's
 Med Savers Pharmacy
 Medicine Shoppe - Denison
 Melden & Hunt, Inc.
 Methodist System
 Mexia-Principal Inc. - Parkview Regional Hospital
 Michael Fabian Surveying, Inc.
 Midas Speedy Auto Service Experts
 Midwest Fabrication
 Midwest Machine, LLC.
 Minendeo Eye Center
 Mission Maintenance Facility
 Mitchell County Hospital
 Moore County Hospital District
 Mother Parkers Tea & Coffee
 MTZ Entertainment
 Muenster Pharmacy
 Nemmer Electric
 New Life Prosthetics & Orthotics
 New York Pizza & Pasta
 Newly Weds Foods
 Nextel Energy
 NTMC
 NuCare Pharmacy
 Ocean Spray
 Ochiltree Hospital
 Ochiltree Hospital District
 Odessa Pumps
 Oncor
 Onestaff Medical
 Onin Staffing
 Oppliger Land & Cattle
 Optical Dispensary
 Optimal Physical Therapy Solutions
 O'reilly Auto Parts
 Orthopedic Associates of Central Texas
 Oxbow
 Pacheco Koch Consulting
 Pactiv LLC Abilene TX
 PAE, Inc.
 Pampa Regional Medical Center
 Panera Bread
 Panhandle Harvesting Services, LLC.
 Pappadeaux's
 Paris Family Dentist
 Paris Optical
 Paris Regional Medical Center
 Paris Smiles
 Parmer County Community Hospital
 Paul R Farmer DDS
 Pena Engineering
 People's Pharmacy
 Pep Boys Auto Parts & Service
 Permian Basin Rehab Center

Pilgrim's Pride
 Pilot Flying J
 Pioneer Natural Resources
 Plains Memorial Hospital
 Port Enterprises, Ltd.
 PPC Supplies
 Pratt & Whitney DARO
 Precision Ceramics
 Precision Dental Lab
 Premier Retina Specialist
 Primoris Services Corporation
 Pro-Care Medical Center
 Progress Rail Services
 QS Dental Laboratory
 Quest Diagnostics, Inc.
 Ram Aircraft, LP
 Readymen Staffing
 Recana Solutions Inc
 Regency IHS Therapy Consulting, LLC
 Rehab Synergies
 Reichhold Chemicals
 Richardson Dentistry
 Rio Delta Surveying
 Rio Surveying Co.
 RMS Aerospace
 Root & Brown LLC
 Rosales Dental Lab
 Round Rock Prosthetics (Austin Location)
 Row Surveying Services, LLC.
 Royse City Dental
 Ruben's Body Shop
 Safran Electronics & Def. Avionics USA, LLC.
 Saulsbury Industries
 Salganik Vision Group & Optique
 Saltgrass Port Arthur
 SAM LLC
 Sam Rayburn Memorial Veterans Center
 Sam's Club Optical
 Sam's Pharmacy
 Sanderra RX Specialty Pharmacy
 Saputo
 Sav-On Denison
 Sav-On Sherman
 Scallon Controls, Inc.
 Seaboard Food Services, Inc.
 Securus Technology
 Sendero Drilling
 Service King Collision Repair
 Seton Healthcare Family
 Si Clinica
 Signature Science
 Sikorsky_(Lockheed Martin)
 Silsbee Oaks Health Care, LLP.
 Simply Vast

Singler Dental Ceramics Inc.
 Sivals, Inc.
 Skanska
 Sodexo
 South Texas Health Systems
 South Texas Personal Care
 Southern Champion Tray
 Southwest Area Regional Transit
 Southwestern Motor Transportation
 Space Exploration Technologies
 Spherion Staffing
 Spicy Mike's BBQ
 Sport Therapy
 Sprint
 St. David's Healthcare
 Stamford Memorial Hospital
 Star Power
 Starr County Memorial Hospital
 STHS Edinburg & Children's
 Su Clinica
 Summit Dental Lab Ltd.
 Sunset Eye Care
 Superior Marine Technical
 Supplemental Health Care
 Survey Works
 SWART
 Sweet Shop USA
 Swisher Memorial Healthcare System
 TagleRock Technologies, LLC.
 Talon Industries, Inc.
 Tarrytown Pharmacy
 Tejas Feeders
 Temps Plus
 Tequila's Mexican Restaurant
 Terracon
 Texas A&M Forest Service
 Texas Bone & Joint
 Texas Denture Clinic
 Texas Department of Transportation
 Texas Health Arlington Memorial
 Texas Health Harris Methodist Hospital Alliance
 Texas Health Huguley Hospital
 Texas Land Surveying
 Texas Oncology
 Texas Parks & Wildlife (Palo Duro Canyon)
 Texas Society of Professional Surveyors
 Texas State Optical
 The Austin Diagnostic Clinic
 The Brandt Companies, LLC
 The Eye Guys
 The Eye Institute
 The Hospital at Westlake Medical Center
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 Tim's Welding

Titus Regional Medical Center
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TMC - Denison
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United States Gypsum, Co.
University Medical Supply
University of Texas Health Science Center
Up Wind
Urgent Orthopedic Specialists
US Park Service (Lake Meredith)
Utex Industries, Inc.
Val Verde County
Valero
Valley Baptist Medical
Valley Regional Medical Center
Valley Striping Corporation
Valley Vending Service VVS Inc. - Cactus
Valverde Vegetable Co Inc.
Van Tran Industries, Inc.
Vestes
Vibra Rehabilitation Hospital of Lake Travis
Vibrant Smiles
Vic Auto Rebuilders
Villarreal's Express Lube
Vision Health Specialties
Vision Values
Visionworks
Vulcan Materials Company
Waco Dental & Denture Care
Wadley
Walgreen's (Broadway)
Walgreen's (Midway)
Walmart Vision
Waterloo Surveyors, Inc.
We Are Blood
Weber Construction
Wellington Care Center
West Dental Lab
West Fraser
Western Sales & Testing of Amarillo
WETS
WGSJ Oil Field Service, LLC
White Wright Pharmacy
WNJ
Workbox Staffing
WOW Food Concepts
WSP US

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APPENDIX: LIST OF INDUSTRY-BASED CERTIFICATIONS WITH CERTIFYING ENTITIES AND STANDARD OCCUPATION CLASSIFICATION CODES

The diagram below explains how to read the appendix, which includes the full list of industry-based certifications with certifying entities and standard occupation classification (SOC) codes.

Column 1 contains the name of the middle-skill STEM occupation or IT-related functional area. Column 2 lists the name of the certification. Column 3 indicates the SOC code related to the name in Column 1. Column 4 designates the certifying entity for each certification in Column 2. Columns 5 through 8 specify whether the certification is national, accredited, endorsed, or licensed in Texas.

Name	Industry-Based Certification	SOC	Certifying Entity	National	Accredited	Endorsed	Licensed
Aerospace Engineering and Operations Technician	Aerospace Manufacturing Certification	17-3021	SpaceTEC	Y	ICAC		
Animal Breeder	Certified Aerospace Technician	17-3021	SpaceTEC	Y	ICAC		
Automotive Service Technician and Mechanic	Licensed Breeder	45-2021	Texas Department of Licensing and Regulation	N			TX
	Automobile Service Technology	49-3023	National Institute for Automotive Service Excellence	Y			
	Auto Maintenance and Light Repair	49-3023	National Institute for Automotive Service Excellence	Y			
	Collision Repair and Refinish: Mechanical and Electrical Components	49-3023	National Institute for Automotive Service Excellence	Y			
	Collision Repair and Refinish: Structural Analysis and Damage Repair	49-3023	National Institute for Automotive Service Excellence	Y			
	Medium/Heavy Truck Technician: Brakes	49-3023	National Institute for Automotive Service Excellence	Y			
	Medium/Heavy Truck Technician: Diesel Engines	49-3023	National Institute for Automotive Service Excellence	Y			
	Medium/Heavy Truck Technician: Drive Trains	49-3023	National Institute for Automotive Service Excellence	Y			
	Medium/Heavy Truck Technician: Electrical/Electronic Systems	49-3023	National Institute for Automotive Service Excellence	Y			
	Medium/Heavy Truck Technician: Heating, Ventilation, & A/C	49-3023	National Institute for Automotive Service Excellence	Y			
	Medium/Heavy Truck Technician: Suspension and Steering	49-3023	National Institute for Automotive Service Excellence	Y			
	Automobile Service Consultant	49-3023	National Institute for Automotive Service Excellence	Y			
	Automobile Technician: Automatic Transmission/Transaxle	49-3023	National Institute for Automotive Service Excellence	Y			
	Automobile Technician: Brakes	49-3023	National Institute for Automotive Service Excellence	Y			
	Automobile Technician: Electrical/Electronic Systems	49-3023	National Institute for Automotive Service Excellence	Y			
	Automobile Technician: Engine Performance	49-3023	National Institute for Automotive Service Excellence	Y			
	Automobile Technician: Heating and Air Conditioning	49-3023	National Institute for Automotive Service Excellence	Y			
	Automobile Technician: Manual Drive Train and Axles	49-3023	National Institute for Automotive Service Excellence	Y			
	Automobile Technician: Service Consultant	49-3023	National Institute for Automotive Service Excellence	Y			
	Automobile Technician: Suspension and Steering	49-3023	National Institute for Automotive Service Excellence	Y			

Definitions

Accredited – recognition that the content and quality of the program has been evaluated and meets standards set by the profession

Endorsed – approval or support from a major national industry association

Key

Accrediting Organizations:

- Accreditation Council for Occupational Therapy Education (ACOTE)
- American National Standards Institute (ANSI)
- International Certification Accreditation Council (ICAC)
- National Commission for Certifying Agencies (NCCA)

Endorsing Organizations:

- National Association of Manufacturers (NAM)
- SkillsUSA

Name	Industry-Based Certification	SOC	Certifying Entity	National Accredited	Endorsed	Licensed
Aerospace Engineering and Operations Technician	Aerospace Manufacturing Certification Certified Aerospace Technician	17-3021 17-3021	SpaceTEC SpaceTEC	Y Y	IGAC IGAC	
Animal Breeder	Licensed Breeder	45-2021	Texas Department of Licensing and Regulation	N		TX
Automotive Service Technician and Mechanic	Automobile Service Technology	49-3023	National Institute for Automotive Service Excellence	Y		
	Auto Maintenance and Light Repair	49-3023	National Institute for Automotive Service Excellence	Y		
	Collision Repair and Refinish: Mechanical and Electrical Components	49-3023	National Institute for Automotive Service Excellence	Y		
	Collision Repair and Refinish: Structural Analysis and Damage Repair	49-3023	National Institute for Automotive Service Excellence	Y		
	Medium/Heavy Truck Technician: Brakes	49-3023	National Institute for Automotive Service Excellence	Y		
	Medium/Heavy Truck Technician: Diesel Engines	49-3023	National Institute for Automotive Service Excellence	Y		
	Medium/Heavy Truck Technician: Drive Trains	49-3023	National Institute for Automotive Service Excellence	Y		
	Medium/Heavy Truck Technician: Electrical/Electronic Systems	49-3023	National Institute for Automotive Service Excellence	Y		
	Medium/Heavy Truck Technician: Heating, Ventilation, & A/C	49-3023	National Institute for Automotive Service Excellence	Y		
	Medium/Heavy Truck Technician: Suspension and Steering	49-3023	National Institute for Automotive Service Excellence	Y		
	Automobile Service Consultant	49-3023	National Institute for Automotive Service Excellence	Y		
	Automobile Technician: Automatic Transmission/Transaxle	49-3023	National Institute for Automotive Service Excellence	Y		
	Automobile Technician: Brakes	49-3023	National Institute for Automotive Service Excellence	Y		
	Automobile Technician: Electrical/Electronic Systems	49-3023	National Institute for Automotive Service Excellence	Y		
	Automobile Technician: Engine Performance	49-3023	National Institute for Automotive Service Excellence	Y		
	Automobile Technician: Engine Repair	49-3023	National Institute for Automotive Service Excellence	Y		
	Automobile Technician: Heating and Air Conditioning	49-3023	National Institute for Automotive Service Excellence	Y		
	Automobile Technician: Manual Drive Train and Axles	49-3023	National Institute for Automotive Service Excellence	Y		
	Automobile Technician: Service Consultant	49-3023	National Institute for Automotive Service Excellence	Y		
	Automobile Technician: Suspension and Steering	49-3023	National Institute for Automotive Service Excellence	Y		
	Automobile Technician - Light Vehicle Diesel Engines (A9)	49-3023	National Institute for Automotive Service Excellence	Y		
Avionics Technician	Electronics Technician	49-2091	International Society of Certified Electronics Technicians	Y	ANSI	
Business Analyst - Computer Systems Analyst	Multiple - by certifying entity	15-1121	IBM Corporation	Y		
	Multiple - by certifying entity	15-1121	Oracle Corporation	Y		
	Multiple - by certifying entity	15-1121	SAP America, Inc.	Y		
	Multiple - by certifying entity	15-1121	World Organization of Webmasters	Y		SkillsUSA
Business Operations Manager	Multiple - by certifying entity	11-9199	IBM Corporation	Y		
	Multiple - by certifying entity	11-9199	SAP America, Inc.	Y		
	Multiple - by certifying entity	11-9199	Oracle Corporation	Y		
Cardiovascular Technologist and Technician	Certified Cardiac Technician (CCT)	29-2031	Cardiovascular Credentialing International	Y	ANSI	
	Certified ECG Technician (NCET)	29-2031	National Center for Competency Testing	Y	NCCA	
	Certified EKG Technician (CET)	29-2031	National Healthcareer Association	Y	NCCA	
	Machine Building Levels II, III Mechanical Assembly	51-4011	National Institute for Metalworking Skills	Y		NAM
Computer-Controlled Machine Tool Operator, Metal and Plastic	ISA Certified Control Systems Technician	51-4011	International Society of Automation	Y		NAM
	CNC Milling Skills Levels II, III, Operations	51-4011	National Institute for Metalworking Skills	Y		NAM
	Job Planning, Benchmark and Layout	51-4011	National Institute for Metalworking Skills	Y		NAM
	Measurement, Materials and Safety	51-4011	National Institute for Metalworking Skills	Y		NAM
	Metalforming Level 1	51-4011	National Institute for Metalworking Skills	Y		NAM
	CNC Turning Levels II, III, Operations	51-4012	National Institute for Metalworking Skills	Y		NAM
Computer Numerically Controlled Machine Tool Programmer, Metal and Plastic	Slide Forming Levels II, III	51-4012	National Institute for Metalworking Skills	Y		NAM
Computer Repair	Multiple - by certifying entity	49-2011	Alcatel	Y		
	Multiple - by certifying entity	49-2011	Apple Computer, Inc.	Y		
	Multiple - by certifying entity	49-2011	Brocade Communications Systems, Inc.	Y		
	Multiple - by certifying entity	49-2011	Computing Technology Industry Association (CompTIA)	Y	ANSI	
Dental Assistant	Certified Dental Assistant	31-9091	Texas State Board of Dental Examiners	N		TX
Dental Hygienist	Licensed Dental Hygienist	29-2021	Texas State Board of Dental Examiners	N		TX
Dental Laboratory Technician	Certified Dental Technician	51-9081	National Board for Certification in Dental Laboratory Technology	Y		

Name	Industry-Based Certification	SOC	Certifying Entity	National Accredited	Endorsed	Licensed
Diagnostic Medical Sonographer	Registered Technologist - Computed Tomography	29-2032	American Registry of Radiologic Technologists	Y	NCCA	
	Registered Technologist - Radiography	29-2032	American Registry of Radiologic Technologists	Y	NCCA	
	Registered Technologist - Vascular Sonography	29-2032	American Registry of Radiologic Technologists	Y	NCCA	
	Registered Technologist - Vascular-Interventional Radiography	29-2032	American Registry of Radiologic Technologists	Y	NCCA	
	Registered Vascular Technology	29-2032	American Registry of Diagnostic Medical Sonographers	Y	ANSI	
	Registered Technologist - Mammography	29-2032	American Registry of Radiologic Technologists	Y	NCCA	
	Registered Technologist - Sonography	29-2032	American Registry of Radiologic Technologists	Y	NCCA	
	Registered Diagnostic Medical Sonographer - Abdomen	29-2032	American Registry of Diagnostic Medical Sonographers	Y	ANSI	
	Registered Diagnostic Medical Sonographer - Obstetrics and Gynecology	29-2032	American Registry of Diagnostic Medical Sonographers	Y	ANSI	
	Registered Technologist - Nuclear Medicine Technology	29-2032	American Registry of Radiologic Technologists	Y	NCCA	
Dietetic Technician	Licensed Dietetic Technician	29-2051	Texas State Board of Dietitians	N		TX
Electrical and Electronic Engineering Technician	Electrical Level I	17-3023	National Center for Construction Education and Research	Y		
	Electronic Systems Technician, Level I	17-3023	National Center for Construction Education and Research	Y		
Electrician	Licensed Electrician	47-2111	Texas Department of Licensing and Regulation	N		TX
Electronic Home Entertainment Equipment Installer, Repairer	Certified Electronic Systems Technician	49-2097	Electronic Systems Professional Alliance	Y		
	Certified Engineering Technician - Audio Systems	49-2097	National Institute for Certification in Engineering Technologies	Y		
	Certified Electronics Systems Associate	49-2097	International Society of Certified Electronics Technicians	Y	ANSI	
	Wireless Systems Installer Technician	49-2097	National Association of Radio and Telecommunications Engineers, Inc.	Y	ICAC	
Emergency Medical Technician and Paramedic	Licensed Paramedic	29-2041	Texas Department of State Health Services	N		TX
Graphic Designer	Multiple - by certifying entity	27-1024	Adobe Systems Incorporated	Y		
	Multiple - by certifying entity	27-1024	Certified Internet Web Professionals	Y		
Hearing Aid Specialist	Licensed Hearing Instrument Fitter and Dispenser	29-2092	Texas Department of Licensing and Regulation	N		TX
Licensed Practical and Licensed Vocational Nurse	Licensed Vocational Nurse	29-2061	Texas Board of Nursing	N		TX
Magnetic Resonance Imaging Technologist	Registered Technologist - Cardiac-Interventional Radiography	29-2035	American Registry of Radiologic Technologists	Y	NCCA	
	Magnetic Resonance Imaging Technologist	29-2035	American Registry of Magnetic Resonance Imaging Technologists	Y	NCCA	
	Registered Technologist - Magnetic Resonance Imaging	29-2035	American Registry of Radiologic Technologists	Y	NCCA	
Manufacturing Production Technician	Certified Logistics Associate (CLA)	17-3029	Manufacturing skill Standards Council	Y		
	Certified Logistics Technician (CLT)	17-3029	Manufacturing skill Standards Council	Y		
	Certified Production Technician	17-3029	Manufacturing skill Standards Council	Y		
Mechanical Engineering Technician	Certified Quality Technician	17-3027	American Society for Quality	Y	NAM	
Medical and Clinical Laboratory Technician	International Medical Technologist	29-2012	American Society for Clinical Pathology	Y	ANSI	
	Medical Laboratory Technician	29-2012	American Society for Clinical Pathology	Y	ANSI	
	Medical Lab Assistant	29-2012	American Medical Technologists	Y	NCCA	
	Certified Safety Professional	29-9012	Board of Certified Safety Professionals	Y		
	Medical Laboratory Technician	29-2012	American Medical Technologists	Y	NCCA	
	Phlebotomy Technician	29-2012	National Healthcareer Association	Y	NCCA	
Medical Assistant	Clinical Medical Assistant	31-9092	National Healthcareer Association	Y	NCCA	
Network Data/Analyst	Multiple - by certifying entity	15-1141	EC-Council	Y		
	Multiple - by certifying entity	15-1141	Cisco Systems, Inc.	Y	ANSI	
	Multiple - by certifying entity	15-1141	Citrix Systems Incorporated	Y		
	Multiple - by certifying entity	15-1141	Oracle Corporation	Y		
Network Security	Multiple - by certifying entity	15-1152	ETA International	Y	ICAC	
	Multiple - by certifying entity	15-1152	Global Information Assurance Certification	Y	ANSI	
	Multiple - by certifying entity	15-1152	Cisco Systems, Inc.	Y	ANSI	
	Multiple - by certifying entity	15-1152	Computing Technology Industry Association (CompTIA)	Y	ANSI	
Network Support - Computer Network Support Specialist	Multiple - by certifying entity	15-1152	Alcatel	Y		
	Multiple - by certifying entity	15-1152	Apple Computer, Inc.	Y		
	Multiple - by certifying entity	15-1152	Certified Wireless Network Professional	Y		
	Multiple - by certifying entity	15-1152	Cisco Systems, Inc.	Y	ANSI	
	Multiple - by certifying entity	15-1152	Citrix Systems Incorporated	Y		
	Multiple - by certifying entity	15-1152	Computing Technology Industry Association (CompTIA)	Y	ANSI	
	Multiple - by certifying entity	15-1152	Hewlett Packard Certification and Learning	Y		
	Multiple - by certifying entity	15-1152	IBM Corporation	Y		

Name	Industry-Based Certification	SOC	Certifying Entity	National Accredited	Endorsed	Licensed
Network Support - Computer Network Support Specialist	Multiple - by certifying entity	15-1152	Juniper Networks	Y		
	Multiple - by certifying entity	15-1152	Linux Professional Institute	Y		
	Multiple - by certifying entity	15-1152	Microsoft Corporation	Y	ANSI	
	Multiple - by certifying entity	15-1152	Oracle	Y		
	Multiple - by certifying entity	15-1152	Network Appliance, Inc.	Y		
Network Webmaster/Administrator	Multiple - by certifying entity	15-1152	Network Professional Association	Y		
	Multiple - by certifying entity	15-1142	World Organization of Webmasters	Y		SkillsUSA
	Multiple - by certifying entity	15-1142	Microsoft Corporation	Y	ANSI	
	Multiple - by certifying entity	15-1142	Oracle Corporation	Y		
	Multiple - by certifying entity	15-1142	SAP America, Inc.	Y		
Nuclear Medicine Technologist	Licensed Medical Technologist	29-2033	Texas Medical Board	N		TX
Occupational Therapy Assistant	Occupational Therapy Assistant: Feeding, Eating, and Swallowing	31-2011	American Occupational Therapy Association, Inc.	Y	ACOTE	
	Occupational Therapy Assistant: Environmental Modification	31-2011	American Occupational Therapy Association, Inc.	Y	ACOTE	
	Certified Occupational Therapist Registered	31-2011	National Board for Certification in Occupational Therapy, Inc.	Y	ANSI/NCCA	
	Occupational Therapy Assistant: Driving and Community Mobility	31-2011	American Occupational Therapy Association, Inc.	Y	ACOTE	
Operating Engineer, Construction, and Equipment Operator	Carpenter	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Construction	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	HVAC Technician	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Industrial Millwright	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Industrial Pipefitter	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Instrumentation Technician	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Masonry	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Plumber	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Heavy Equipment Operator: Roller	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Industrial Maintenance Support Mechanic	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Heavy Equipment Operator: Backhoe	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Industrial Maintenance Mechanic	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Heavy Equipment Operator: Level One	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Heavy Equipment Operator: Dozer	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Heavy Equipment Operator: Dump Truck	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Heavy Equipment Operator: Loader	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Heavy Equipment Operator: Excavator	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
	Heavy Equipment Operator: Forklift	47-2073	National Center for Construction Education and Research	Y	ANSI	NAM
Ophthalmic Medical Technician	Certified Ophthalmic Technician	29-2057	Joint Commission on Allied Health Personnel in Ophthalmology	Y	NCCA	
Pharmacy Technician	Certified Pharmacy Technician (CPhT)	29-2052	National Healthcare Association	Y	NCCA	
	Certified Pharmacy Technician (CPhT)	29-2052	Pharmacy Technician Certification Board	Y	NCCA	
Physical Therapist Assistant	Wound Care Certified	31-2021	National Alliance of Wound Care	Y	ANSI	
	Functional Training Specialty Certification	31-2021	American Council on Exercise	Y	NCCA	
	Orthopedic Exercise Specialty Certification	31-2021	American Council on Exercise	Y	NCCA	
	Orthopaedic Technologist Certified	31-2021	National Board for Certification of Orthopaedic Technologists	Y	NCCA	
	Certification in Orthopedic Manual Therapy	31-2021	International Academy of Orthopedic Medicine- US	Y		
Radiologic Technologist	Occupational Therapist Registered	31-2021	National Board for Certification in Occupational Therapy, Inc.	Y	ANSI/NCCA	
	Licensed Medical Radiologic Technologist	29-2034	Texas Department of State Health Services	N		TX
Registered Nurse	Licensed Registered Nurse	29-1141	Texas Board of Nursing	N		TX
Respiratory Therapist	Licensed Respiratory Care Practitioner	29-1126	Texas Medical Board	N		TX
Security Management Specialist - Information Security Analyst	Multiple - by certifying entity	15-1122	Global Information Assurance Certification	Y	ANSI	
	Multiple - by certifying entity	15-1122	Hewlett Packard Certification and Learning	Y		
	Multiple - by certifying entity	15-1122	IBM Corporation	Y		
	Multiple - by certifying entity	15-1122	International Information Systems Security Certification Consortium, Inc.	Y	ANSI	
Security Manager - Information Security Analyst	Multiple - by certifying entity	15-1122	Hewlett Packard Certification and Learning	Y		
	Multiple - by certifying entity	15-1122	IBM Corporation	Y		
Security User Support, Cybersecurity - Information Security Analyst	Multiple - by certifying entity	15-1122	Global Information Assurance Certification	Y		
	Multiple - by certifying entity	15-1122	RSA Security, Inc.	Y		
	Multiple - by certifying entity	15-1122	Symantec	Y		

Name	Industry-Based Certification	SOC	Certifying Entity	National	Accredited	Endorsed	Licensed
Software Developer	Multiple - by certifying entity Multiple - by certifying entity	15-1132	Environmental Systems Research Institute	Y			
		15-1132	Hewlett Packard Certification and Learning	Y			
Surgical Technologist	Certified Surgical Technologist	29-2055	National Board of Surgical Technology and Surgical Assisting	Y	NCCA		
		17-3031	National Institute for Certification in Engineering Technologies	Y			
Surveying and Mapping Technician	Highway Surveys - Level I	17-3031	National Institute for Certification in Engineering Technologies	Y			
	Highway Surveys - Level II	17-3031	National Institute for Certification in Engineering Technologies	Y			
	Highway Surveys - Level III	17-3031	National Institute for Certification in Engineering Technologies	Y			
	Highway Surveys - Level IV	17-3031	National Institute for Certification in Engineering Technologies	Y			
	Certified Surveyor Technician: Office Track Level II	17-3031	National Society of Professional Surveyors	Y			
	Certified Surveyor Technician: Field Track Level III	17-3031	National Society of Professional Surveyors	Y			
	Certified Surveyor Technician: Office Track Level III	17-3031	National Society of Professional Surveyors	Y			
	Certified Survey Technician Level I	17-3031	National Society of Professional Surveyors	Y			
	Certified Surveyor Technician: Field Track Level II	17-3031	National Society of Professional Surveyors	Y			
	Traffic Control Specialist	53-6041	American Traffic Safety Services Association	Y			
	Traffic Control Technician	53-6041	American Traffic Safety Services Association	Y			
	Electronics in Traffic Signal Technician	53-6041	International Municipal Signal Association	Y			
Transportation Inspector	Traffic Signal Bench Technician Level II	53-6041	International Municipal Signal Association	Y			
	Traffic Signal Inspector Level I	53-6041	International Municipal Signal Association	Y			
	Roadway Lighting Technician Level I	53-6041	International Municipal Signal Association	Y			
	Traffic Signal Technician Level I	53-6041	International Municipal Signal Association	Y			
	Certified Safety Supervisor	53-6051	North American Transportation Management Institute	Y			
User Support - Computer User Support Specialist	Multiple - by certifying entity Multiple - by certifying entity Multiple - by certifying entity Multiple - by certifying entity Multiple - by certifying entity Multiple - by certifying entity Multiple - by certifying entity Multiple - by certifying entity Multiple - by certifying entity Multiple - by certifying entity Multiple - by certifying entity Multiple - by certifying entity	15-1151	Apple Computer, Inc.	Y			
		15-1151	Certified Wireless Network Professional	Y			
		15-1151	Computing Technology Industry Association (CompTIA)	Y	ANSI		
		15-1151	Global Information Assurance Certification	Y	ANSI		
		15-1151	ETA International	Y	ICAC		
		15-1151	HDI	Y			
		15-1151	Hewlett Packard Certification and Learning	Y			
		15-1151	IBM Corporation	Y			
		15-1151	Institute for the Certification of Computing Professionals	Y			
		15-1151	Juniper Networks	Y			
		15-1151	Linux Professional Institute	Y			
		15-1151	Microsoft Corporation	Y	ANSI		
Veterinary Assistant and Laboratory Animal Caretaker	Multiple - by certifying entity Multiple - by certifying entity	15-1151	Novell, Inc. - Education	Y			
		15-1151	Oracle Corporation	Y			
Veterinary Technician and Technician	Certified Veterinary Assistant Licensed Veterinary Technician	31-9096	Texas Veterinary Medical Association	N			TX
		29-2056	Texas State Board of Veterinary Medical Examiners	N			TX
Water and Wastewater Treatment Plant and System Operator	Licensed Wastewater Collection System Operators Licensed Water System Operators	51-8031	Texas Commission on Environmental Quality	N			TX
		51-8031	Texas Commission on Environmental Quality	N			TX
Web Developer	Multiple - by certifying entity Multiple - by certifying entity	15-1134	Adobe Systems Incorporated	Y			
		15-1134	Certified Internet Web Professionals	Y			
Webmaster/Administrator	Multiple - by certifying entity Multiple - by certifying entity	15-1141	Adobe Systems Incorporated	Y			
		15-1141	Certified Internet Web Professionals	Y			
Welder, Cutter, Solderer, and Brazier	Structural Steel Welder Sheet Metal Welder	51-4121	American Welding Society	Y			NAM
		51-4121	American Welding Society	Y			NAM

Texas Workforce Investment Council

System Partners

Economic Development and Tourism
Texas Department of Criminal Justice
Texas Education Agency
Texas Health and Human Services Commission

Texas Higher Education Coordinating Board
Texas Juvenile Justice Department
Texas Veterans Commission
Texas Workforce Commission

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Texas Health and Human Services Commission
Texas Workforce Commission
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and Tourism

Texas Workforce Investment Council
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<https://gov.texas.gov/organization/twic>