INDUSTRY-BASED CERTIFICATIONSFOR MIDDLE-SKILL STEM OCCUPATIONS IN TEXAS

Texas Workforce Investment Council November 2018

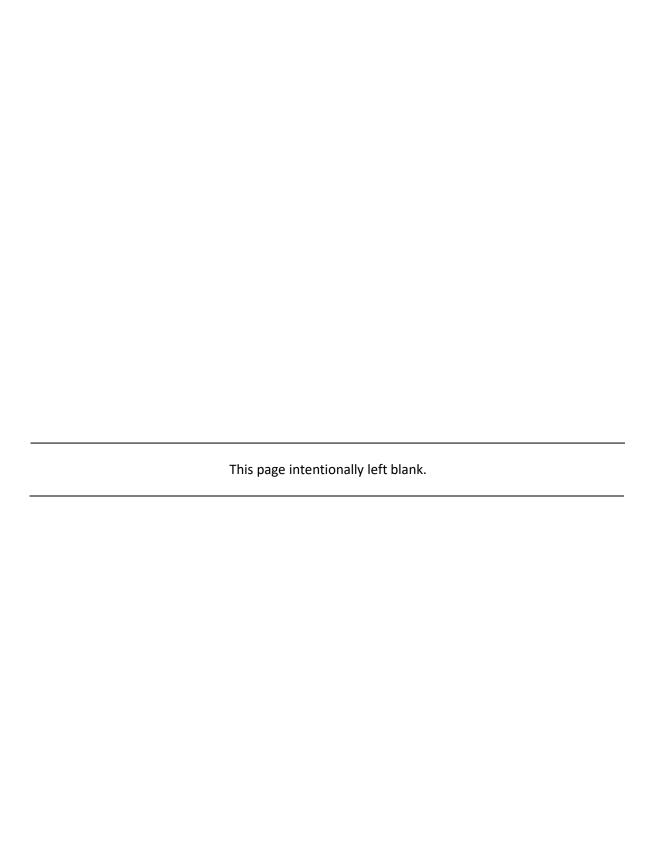
The Mission of the Texas Workforce Investment Council Assisting the Governor and the Legislature with strategic planning for and evaluation of the Texas workforce system to promote the development of a well-educated, highly skilled workforce for Texas.

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-The center column contains labor market data for each middle-skill skill STEM occupation in bold print, followed by the STEM occupation. The first number is the projected employment by standard occupation code (SOC) and the number of 2026. The second number is the projected change in employment. Texas workers in this occupation in 2016. The third number is the 2017 median annual wage for the occupation. MIDDLE-SKILL STEM OCCUPATIONS INDUSTRY-BASED CERTIFICATIONS ring and Operations Technician Netrospace Engineering and Operations 1 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 520 13.9% Animal Breeder SOC 45-2021|460 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage \$48,498 Licensed Breeder Automotive Service Technician and Mechanic SOC 49-3023 | 54,140 workers Automobile Technician: Automatic Transmission/Transaxle
Automobile Technician: Cardomatic Transmission/Transaxle
Automobile Technician: Electrical/Electronic Systems
Automobile Technician: Electrical/Electronic Systems
Automobile Technician: Engine Performance
Automobile Technician: Engine Repair
Automobile Technician: Manual Priver Train and Axles
Automobile Technician: Susuparios and Axles
Automobile Technician: Susuparios and Steering
Automobile Technician: Susuparios and Steering
Automobile Technician: Susuparios and Steering
Automobile Technician: Supersion and Steering
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: Brabes
Medium/Heavy Truck Technician: Drive Trains
Medium/Heavy Truck Technician: Electrical/Electronic Systems
Medium/Heavy Truck Technician: Suspension and Steering
Medium/Heavy Truck Technician: Suspension and Steering 61,820 14.2% \$39,773 **Automotive Service Technician and Mechanic** SOC 49-3023 | 54,140 workers Avionics Technician SOC 49-2091 | 1,860 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage Electronics Technician Cardiovascular Technnologist and Technician SOC 29-2031|5,200 workers Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage Certified Cardiographic Technician Cerfified ECG Technician Cerfified 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 ISA Certified Control Systems Technician 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 34,670 22.0% \$35,028 ase 2016-2026

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



INDUSTRY-BASED CERTIFICATIONS



	Aerospace	Engineering	and O	perations	Technician
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SOC 17-3021 1,180 workers		
Projected employment by 2026	1,360	Aerospace Manufacturing Certification
Projected employment increase 2016-2026	14.8%	Certified Aerospace Technician
2017 median annual wage	\$60,365	

Animal Breeder

SOC 49-3023 | 54,140 workers

SOC 45-2021 460 workers		
Projected employment by 2026	520	Licensed Breeder
Projected employment increase 2016-2026	13.9%	Electional Direction

2017 median annual wage \$48,498

Automotive Service Technician and Mechanic

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 Performance

Automobile Technician: Engine Repair
Automobile Technician: Heating and Air Conditioning
Automobile Technician: Manual Drive Train and Axles
Automobile Technician: Service Consultant

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	2,030	Electronics Technician
Projected employment increase 2016-2026	9.4%	
2017 median annual wage	\$57,864	

Cardiovascular Technnologist and Technician

SOC 29-2031 5,200 workers		
Projected employment by 2026	6,290	Certified Cardiographic Technician
Projected employment increase 2016-2026	20.9%	Cerfified ECG Technician
2017 median annual wage	\$43,798	Cerfified FKG Technician

Computer-Controlled Machine Tool Operator, Metal and Plastic

SOC 51-4011 10,580 workers		
Projected employment by 2026	12,160	Machine Building Levels II, III Mechanical Assembly
Projected employment increase 2016-2026	14.9%	ISA Certified Control Systems Technician
2017 median annual wage	\$40,776	CNC Milling Skills Levels II, III, Operations
2017		Job Planning, Benchwork and Layout
		Measurement, Materials and Safety
		Metalforming Level 1

Computer Numerically Controlled Machine Tool Programmer

30C 31-4012 1,070 WOI KET3		
Projected employment by 2026	2,230	CNC Turning Levels II, III, Operations
Projected employment increase 2016-2026	33.8%	Slide Forming Levels II, III
2017 median annual wage	\$53,087	_

Dental Assistant

SOC 51-4012 | 1 670 workers

Deritar / toolstarit		
SOC 31-9091 28,420 workers		
Projected employment by 2026	34,670	Certified Dental Asistant
Projected employment increase 2016-2026	22.0%	
2017 median annual wage	\$35,028	



INDUSTRY-BASED CERTIFICATIONS



Dental	LUV	ai a	nict
Denta	пν	RIE	IIISL

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	2,720 17.7%	Certified Dental Technician
2017 median annual wage	\$36,767	
Diagnostic Medical Sonographer		
SOC 29-2032 5,230 workers		
Projected employment by 2026	7,040	Registered Technologist - Computed Tomography
Projected employment increase 2016-2026	34.6%	Registered Technologist - Radiography
2017 median annual wage	\$71,801	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	3,360	Licensed Dietetic Technician
Projected employment by 2026 Projected employment increase 2016-2026	16.7%	
2017 median annual wage	\$23,462	
Electrical and Electronic Engineering Technician		
SOC 17-3023 15,110 workers Projected employment by 2026		Floatsian Laurell
Projected employment by 2020 Projected employment increase 2016-2026	16,800 11.2%	Electrical, Level I
2017 median annual wage	\$65,228	Electronic Systems Technician, Level I
	, (O), (E)	
Electrician		
SOC 47-2111 61,480 workers		
Projected employment by 2026	72,110	Licensed Electrician
Projected employment increase 2016-2026	17.3%	
2017 median annual wage	\$47,382	
Electronic Home Entertainment Equipment Installer, Repairer		
SOC 49-2097 2,190 workers	2.5	Cortified Electronic Systems Technician
Projected employment by 2026	2,540 16.3%	Certified Electronic Systems Technician Certified Engineering Technician - Audio Systems
Projected employment increase 2016-2026 2017 median annual wage	\$29,216	Certified Electronics Systems Associate
2017 median annuai wage	723,21U	Wireless Systems Installer Technician
Emergency Medical Technician and Paramedic		
SOC 29-2041 18,720 workers		
Projected employment by 2026		15

Hearing Aid Specialist

2017 median annual wage

Projected employment by 2026

Projected employment increase 2016-2026

SOC 29-2092 | 410 workers

Projected employment by 2026
Projected employment increase 2016-2026
2017 median annual wage

520
Licensed Hearing Instrument Fitter and Dispenser
25.5%
2017 median annual wage
\$45,494

22,400

19.7%

\$34,429

Licensed Paramedic



INDUSTRY-BASED CERTIFICATIONS



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 Tecnician
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



INDUSTRY-BASED CERTIFICATIONS



Operating Engineer, Construction, and Equipment Operator

SOC 47-2073 | 36,830 workers

Projected employment by 2026 Projected employment increase 2016-2026

2017 median annual wage

44,450 20.7% \$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

Projected employment increase 2016-2026 2017 median annual wage

Certified Ophthalmic Technician

Pharmacy Technician

SOC 29-2052 | 32,900 workers Projected employment by 2026

Projected employment increase 2016-2026 2017 median annual wage

39,900 21.3% \$32,915

5.300

25.1%

\$31,953

Physical Therapist Assistant SOC 31-2021 | 6,850 workers Projected employment by 2026

Projected employment increase 2016-2026

2017 median annual wage

9,400 37.3% \$69,240

Wound Care Certified

Certified Pharmacy Technician

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 Projected employment increase 2016-2026

2017 median annual wage

19.530 22.8% \$57,245

Licensed Medical Radiologic Technologist

Registered Nurse

SOC 29-1141 | 210,780 workers

Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage

261,610 24.1% \$70,733 Licensed Registered Nurse

Respiratory Therapist

SOC 29-1126 | 11,780 workers Projected employment by 2026

Projected employment increase 2016-2026 2017 median annual wage

15,940 35.3% \$59,002 Licensed Respiratory Care Practitioner

Surgical Technologist

SOC 29-2055 | 10,870 workers

Projected employment by 2026 Projected employment increase 2016-2026 2017 median annual wage

13,130 20.8% \$47,129 Certified Surgical Technologist

9



INDUSTRY-BASED CERTIFICATIONS



Surveying and Mapping Technician

SOC 17-3031 | 8,210 workers

Projected employment by 2026 10,060 Highway Surveys - Level I Projected employment increase 2016-2026 Highway Surveys - Level II 22.5% \$41,801 Highway Surveys - Level III 2017 median annual wage

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 Traffic Control Specialist 490 Projected employment increase 2016-2026 Traffic Control Technician 16.5% 2017 median annual wage \$39,347 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

2017 median annual wage

2017 median annual wage

SOC 53-6051 | 3,730 workers Certified Safety Supervisor 4,270 Projected employment by 2026 14.4% Projected employment increase 2016-2026 \$79,317

Veterinary Assistant and Laboratory Animal Caretaker

SOC 31-9096 | 5,110 workers Projected employment by 2026 Certified Veterinary Assistant 6,380 24.9% Projected employment increase 2016-2026

Veterinary Technologist and Technician

SOC 29-2056 | 9,290 workers Projected employment by 2026 11.650 Licensed Veterinary Technician Projected employment increase 2016-2026 25.5% 2017 median annual wage

Water and Wastewater Treatment Plant and System Operator

SOC 51-8031 | 10,320 workers Projected employment by 2026 10.840 Licensed Wastewater Collection System Operators Projected employment increase 2016-2026 5.0% Licensed Water System Operators \$37,347 2017 median annual wage

\$23,635

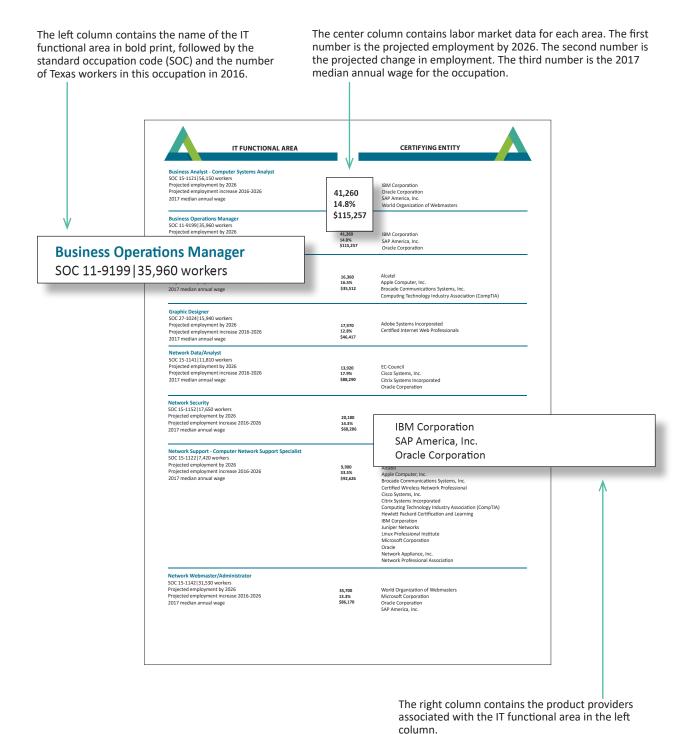
\$29,672

Welder, Cutter, Solderer, and Brazer

SOC 51-4121 | 54,410 workers Projected employment by 2026 64,160 Structural Steel Welder Projected employment increase 2016-2026 17.9% Sheet Metal Welder 2017 median annual wage \$42,286

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.





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

Projected employment increase 2016-20 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 9,900 Global Information Assurance Certification Projected employment increase 2016-2026 33.5% Hewlett Packard Certification and Learning \$92,626 2017 median annual wage **IBM** Corporation

International Information Systems Security Certification

Consortium, Inc.

Security Manager - Information Security Analyst

SOC 15-1122 | 7,420 workers

Projected employment by 2026 **Hewlett Packard Certification and Learning** 9,900 Projected employment increase 2016-2026 **IBM** Corporation

33.5% 2017 median annual wage \$92,626

Security User Support, Cybersecurity - Information Security Analyst

SOC 15-1122 | 7,420 workers

Projected employment by 2026 Global Information Assurance Certification 9,900

Projected employment increase 2016-2026 33.5% RSA Security, Inc. \$92,626 2017 median annual wage Symantec

Software Developer

SOC 15-1132 | 59,380 workers

Projected employment by 2026 **Environmental Systems Research Institute** 79,130 Projected employment increase 2016-2026 **Hewlett Packard Certification and Learning** 33.3% 2017 median annual wage \$107,722

User Support - Computer User Support Specialist

SOC 15-1151|56,370 workers

Projected employment by 2026 66,640 Apple Computer, Inc. Projected employment increase 2016-2026 18.2%

Certified Wireless Network Professional 2017 median annual wage

\$49,428 Computing Technology Industry Association (CompTIA)

Global Information Assurance Certification

ETA International

HDI

Hewlett Packard Certification and Learning

IBM Corporation

Oracle Corporation

Institute for the Certification of Computing Professionals

Juniper Networks Linux Professional Institute Microsoft Corporation Novell, Inc. - Education

Web Developer

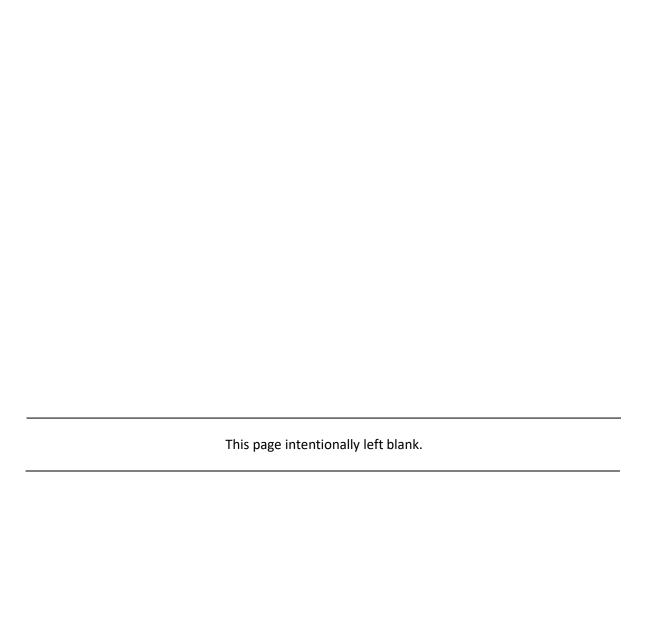
SOC 15-1134 | 10,130 workers

Projected employment by 2026 12,100 Adobe Systems Incorporated Projected employment increase 2016-2026 19.5% Certified Internet Web Professionals 2017 median annual wage \$68,665

Webmaster/Administrator

SOC 15-1141 | 11,810 workers

Projected employment by 2026 13,920 Adobe Systems Incorporated Projected employment increase 2016-2026 17.9% Certified Internet Web Professionals 2017 median annual wage \$88,290



ACKNOWLEDGEMENTS

The Texas Workforce Investment Council would like to thank the state's local workforce boards and the following entities for their participation in this system initiative:

Participating Texas Employers

1424 Bistro **Ballard Family Dentistry**

287 Roadhouse **BASF** 38th Street Pharmacv

Baylor Scott & White A.E. Hiller & Son Inc. **Baytown Enterprise Products Operating**

Abilene Advanced Evecare 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

Bluebonnet Health Service

Affordable Dentures & Implants **Bob Evans Foods**

Air Liauid 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

Geonyx 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 Enginering 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.

South Texas Health Systems

Sivalls, Inc. Skanska Sodexo

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

Therapy 2000 Tim's Welding Titus Regional Medical Center

TMC - Bonham

TMC - Denison

Total Physical Therapy

Trew James

Trinity Industries, LLC.

Triple S Industrial Corp.

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

WGSI Oil Field Service, LLC

White Wright Pharmacy

WNJ

Workbox Staffing

WOW Food Concepts

WSP US



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	Column 2 lists the name of the	Column 3 indicates the	Column 4 designates the	Columns 5 through 8 specify
middle-skill STEM occupation or IT-	certification.	SOC code related to the	certifying entity for each	whether the certification
related functional area.		name in Column 1.	certification in Column 2.	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
	Certified Aerospace Technician	17-3021	SpaceTEC	Y ICAC
Animal Breeder	Licensed Breeder	45-2021	Texas Department of Licensing and Regulation	XT
Automotive Service Technician and Mechanic	Automobile Service Technology	49-3023	National Institute for Automotive Service Excellence	>
	Auto Maintenance and Light Repair	49-3023	National Institute for Automotive Service Excellence	>
	Collision Repair and Refinish: Mechanical and Electrical Components	49-3023	National Institute for Automotive Service Excellence	>
	Collision Repair and Refinish: Structural Analysis and Damage Repair	49-3023	National Institute for Automotive Service Excellence	>
	Medium/Heavy Truck Technician: Brakes	49-3023	National Institute for Automotive Service Excellence	>
	Medium/Heavy Truck Technician: Diesel Engines	49-3023	National Institute for Automotive Service Excellence	>
	Medium/Heavy Truck Technician: Drive Trains	49-3023	National Institute for Automotive Service Excellence	>
	Medium/Heavy Truck Technician: Electrical/Electronic Systems	49-3023	National Institute for Automotive Service Excellence	>
	Medium/Heavy Truck Technician: Heating, Ventilation, & A/C	49-3023	National Institute for Automotive Service Excellence	>
	Medium/Heavy Truck Technician: Suspension and Steering	49-3023	National Institute for Automotive Service Excellence	>
	Automobile Service Consultant	49-3023	National Institute for Automotive Service Excellence	>
	Automobile Technician: Automatic Transmission/Transaxle	49-3023	National Institute for Automotive Service Excellence	>
	Automobile Technician: Brakes	49-3023	National Institute for Automotive Service Excellence	>
	Automobile Technician: Electrical/Electronic Systems	49-3023	National Institute for Automotive Service Excellence	>
	Automobile Technician: Engine Performance	49-3023	National Institute for Automotive Service Excellence	>
	Automobile Technician: Engine Repair	49-3023	National Institute for Automotive Service Excellence	>
	Automobile Technician: Heating and Air Conditioning	49-3023	National Institute for Automotive Service Excellence	>
	Automobile Technician: Manual Drive Train and Axles	49-3023	National Institute for Automotive Service Excellence	>
	Automobile Technician: Service Consultant	49-3023	National Institute for Automotive Service Excellence	>
	Automobile Technician: Suspension and Steering	49-3023	National Institute for Automotive Service Excellence	>

Definitions Accredited = recognition that the content and quality of the
Acciented – Tecognition that the content and quality of the
programmas peem evaluated and infects standards set by the
profession

Endorsed – approval or support from a major national industry association

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)

Key

Endorsing Organizations: National Association of Manufacturers (NAM) SkillsUSA

Name	Industry-Based Certification	200	Certifying Entity	National Acc	National Accredited Endorsed Licensed
Aerospace Engineering and Operations Technician	Aerospace Manufacturing Certification Certified Aerospace Technician	17-3021	SpaceTEC SpaceTEC	> >	ICAC
	מבוניים שבו מלומים ובמוויים וויים וו	1100	מיני ביני	-	
Animal Breeder	Licensed Breeder	45-2021	Texas Department of Licensing and Regulation	z	¥
Automotive Consice Technician and Machanic	Automobile Coming Technology	40.3033	Mational Inditate for Automotive Consider Eventones	>	
	Auto Maintenance and Light Renair	49-3023	National Institute for Automotive Service Excellence	- >	
	Auto Maintenance and Light Nepanical and Electrical Components	49-3023	National Institute for Automotive Service Excellence	- >	
	Collision Repair and Refinish: Structural Analysis and Damage Repair	49-3023	National Institute for Automotive Service Excellence	- >-	
	Medium/Heavy Truck Technician: Brakes	49-3023	National Institute for Automotive Service Excellence	>	
	Medium/Heavy Truck Technician: Diesel Engines	49-3023	National Institute for Automotive Service Excellence	>	
	Medium/Heavy Truck Technician: Drive Trains	49-3023	National Institute for Automotive Service Excellence	>	
	Medium/Heavy Truck Technician: Electrical/Electronic Systems	49-3023	National Institute for Automotive Service Excellence	>	
	Medium/Heavy Truck Technician: Heating, Ventilation, & A/C	49-3023	National Institute for Automotive Service Excellence	> 1	
	Medium/Heavy Truck Technician: Suspension and Steering	49-3023	National Institute for Automotive Service Excellence	>	
	Automobile Service Consultant	49-3023	National Institute for Automotive Service Excellence	>	
	Automobile Technician: Automatic Transmission/Transaxle	49-3023	National Institute for Automotive Service Excellence	> 1	
	Automobile Technician: Brakes	49-3023	National Institute for Automotive Service Excellence	> :	
	Automobile Lechnician: Electrical/Electronic Systems	49-3023	National Institute for Automotive Service Excellence	> :	
	Automobile Technician: Engine Performance	49-3023	National Institute for Automotive Service Excellence	> 1	
	Automobile Technician: Engine Repair	49-3023	National Institute for Automotive Service Excellence	> :	
	Automobile Technician: Heating and Air Conditioning	49-3023	National Institute for Automotive Service Excellence	> :	
	Automobile Technician: Manual Drive Irain and Axles	49-3023	National Institute for Automotive Service Excellence	> >	
	Automobile Technician: Service Consultant Automobile Technician: Suspension and Steering	49-3023	National Institute for Automotive Service Excellence National Institute for Automotive Service Excellence	≻ >	
	Automobile Technician - Light Vehicle Diesel Engines (A9)	49-3023	National Institute for Automotive Service Excellence	- >-	
	0				
Avionics Technician	Electronics Technician	49-2091	International Society of Certified Electronics Technicians	>	ANSI
to large and the state of the s	A A A Children	70 77	IDA Communication	>	
business Analyst - Computer Systems Analyst	Multiple - by certifying entity	15-1121	Dracia Corporation	- >	
	Multiple - by certifying entity Multiple - by certifying entity	15-1121	CAD America Inc	- >	
	Multiple - by certifying entity	15-1121	World Organization of Webmasters	- >-	SkillsUSA
	(a)				
Business Operations Manager	Multiple - by certifying entity	11-9199	IBM Corporation	>-	
	Multiple - by certifying entity	11-9199	SAP America, Inc.	>	
	Multiple - by certifying entity	11-9199	Oracle Corporation	>	
Cardiovascular Technologist and Technician	Certified Cardiographic Technician (CCT)	29-2031	Cardiovascular Credentialing International	>	ANSI
	Certified ECG Technician (NCET)	29-2031	National Center for Competency Testing		NCCA
	Certified EKG Technician (CET)	29-2031	National Healthcareer Association	>	NCCA
Commenter Control to Marchine Teel Connected Material Plants	Manking Duilding Lough II III Machaning Accomply	400	Masternal Landitation Cor Mathematican Chille	>	NA IA
Compare Controlled Machine 1001 Operator, Metal and Flastic	Machine Building Levels II, III Mechanical Assembly ISA Certified Control Systems Technician	51-4011	International Society of Automation	- >	2 2
	CNC Milling Skills Levels II, III, Operations	51-4011	National Institute for Metalworking Skills	· >	NAN
	Job Planning, Benchwork and Layout	51-4011	National Institute for Metalworking Skills	>	NAM
	Measurement, Materials and Safety	51-4011	National Institute for Metalworking Skills	>	NAN
	Metalforming Level 1	51-4011	National Institute for Metalworking Skills	>	NAM
	CNC Turning Lavele II III Ongrations	E1_A012	National Inctitute for Metalworking Skills	>	MAN
Computer Numerically Controlled Machine Tool Programmer. Metal and Plastic	Slide Forming Levels II. III	51-4012	National Institute for Metalworking Skills	- >-	MAN
			0		
Computer Repair	Multiple - by certifying entity	49-2011	Alcatel	> :	
	Multiple - by certifying entity	49-2011	Apple Computer, Inc.	> >	
	Multiple - by certifying entity Multiple - by certifying entity	49-2011	Brocade Communications Systems, Inc. Communiting Technology Industry Association (CompuTIA)	- >	SNS
	ואמונוף ב - סל כפניו אווף בונינל	1107-64	Companing recimongly massar y association (Company)	-	CNIC
Dental Assistant	Certified Dental Assistant	31-9091	Texas State Board of Dental Examiners	z	본
Dental Hygienist	Licensed Dental Hygienist	29-2021	Texas State Board of Dental Examiners	z	¥
Dental Laboratory Technician	Certified Dental Technician	51-9081	National Board for Certification in Dental Laboratory Technology	>	

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

Name	Industry-Based Certification	SOC	Certifying Entity	National Acc	Accredited En	Endorsed Licensed	nsed
Network Support - Computer Network Support Specialist	Multiple - by certifying entity	15-1152	Juniper Networks				ĺ
	Multiple - by certifying entity	15-1152	Linux Professional Institute	>			
	Multiple - hy certifying entity	15-1152	Microsoft Cornoration	>	ISNA		
	Multiple - by certifying eptity	15,1152	ologic				
	Maritime by contribute contribute	2011-01		- >			
	Multiple - by certifying entity Multiple - by certifying outity	15-1152	Network Professional Association	- >			
Network Webmaster/Administrator	Multiple - by certifying entity	15-1142	World Organization of Webmasters	>	š	SkillsUSA	
	Multiple - by certifying entity	15-1142	Microsoft Corporation	>	ANSI		
	Multiple - by certifying entity	15-1142	Oracle Corporation	>			
	Multiple - by certifying entity	15-1142	SAP America, Inc.	>-			
Nuclear Medicine Technologist	Licensed Medical Technologist	29-2033	Texas Medical Board	z		E	¥
Occinational Therany Assistant	Occupational Therapy Assistant: Feeding Fating and Swallowing	31-2011	American Occupational Therapy Association Inc	>	ACOTE		
	Occupational Therapy Assistant: Environmental Modification	31-2011	American Occupational Therapy Association, Inc.		COTE		
	Occupational Therapist Registered	31-2011	National Board for Certification in Occupational Therapy. Inc.		ANSI/NCCA		
	Certified Occupational Therapy Assistant	31-2011	National Board for Certification in Occupational Therapy. Inc.		ANSI/NCCA		
	Occupational Therapy Assistant: Driving and Community Mobility	31-2011	American Occupational Therapy Association, Inc.		ACOTE		
Operating Engineer, Construction, and Equipment Operator	Carpenter	47-2073	National Center for Construction Education and Research	>	ANSI	NAM	
	Construction	47-2073	National Center for Construction Education and Research	>		NAM	
	HVAC Technician	47-2073	National Center for Construction Education and Research			NAM	
	Industrial Milwright	47-2073	National Center for Construction Education and Research			NAM	
	Industrial Piperitter	47-2073	National Center for Construction Education and Research	> >	ANSI	NAM	
	Instrumentation lechnician	47-2073	National Center for Construction Education and Research	> >		AM	
	Masonry	47-2073	National Center for Construction Education and Research	· >	ANS	AM	
	Humber	47-2073	National Center for Construction Education and Research	- >		ANI	
	Heavy Equipment Operator: Koller	47-2073	National Center for Construction Education and Research	· >		AN	
	Industrial Maintenance Support Mechanic	47-2073	National Center for Construction Education and Research	· >	ANS	AN	
	Heavy Equipment Operator: Backnoe	47-2073	National Center for Construction Education and Research	· >		AN	
	Industrial Maintenance Mechanic	47-2073	National Center for Construction Education and Research	> ;		AM	
	Heavy Equipment Operator Level One	47-20/3	National Center for Construction Education and Research	> >	ANS	NAM	
	Heavy Equipment Operator: Dozer	47-2073	National Center for Construction Education and Research			NAM	
	Heavy Equipment Operator: Dump Truck	47-2073	National Center for Construction Education and Research			AM	
	Heavy Equipment Operator: Loader	47-2073	National Center for Construction Education and Research	> ;		NAM	
	Heavy Equipment Operator: Excavator	47-2073	National Center for Construction Education and Research		ANS	NAM	
	neavy Equipment Operator: Forkint	47-2073	National Center for Construction Education and Research			ANN	
Onbthalmic Medical Technician	Certified Ophthalmic Technician	29-2057	Ioint Commission on Allied Health Personnel in Onbthalmology	>	ACCA		
			1900				
Pharmacy Technician	Certified Pharmacy Technician (CPhT)	29-2052	National Healthcareer Association	>	NCCA		
	Certified Pharmacy Technician (CPhT)	29-2025	Pharmacy Technician Certification Board	>	NCCA		
Physical Therapist Assistant	Wound Care Certified	31-2021	National Alliance of Wound Care	>	ANSI		
	Functional Training Specialty Certification	31-2021	American Council on Exercise		NCCA		
	Orthopedic Exercise Specialty Certification	31-2021	American Council on Exercise		NCCA		
	Orthopaedic Technologist Certified	31-2021	National Board for Certification of Orthopaedic Technologists		NCCA		
	Certification in Orthopedic Manual Therapy	31-2021	International Academy of Orthopedic Medicine - US	> >	***************************************		
	Occupational Inerapist Registered	31-2021	National Board for Certification in Occupational Inerapy, inc.		ANSI/NCCA		
Radiologic Technologist	Licensed Medical Radiologic Technologist	29-2034	Texas Department of State Health Services	z		E	¥
		20.44.45	F	-		f	,
negistered nurse	Licensed Registered Nurse	79-1141	lexas board of nursing	Z		2	<u> </u>
Respiratory Therapist	Licensed Respiratory Care Practitioner	29-1126	Texas Medical Board	z		E	×
Security Management Specialist - Information Security Analyst	Multiple - by certifying entity Multiple - by certifying entity	15-1122	Global Information Assurance Certification Howlett Darbard Cortification and Loaming	> >	ANSI		
	Multiple - by certifying entity	15-1122	IBM Corporation	- >-			
	Multiple - by certifying entity	15-1122	International Information Systems Security Certification Consortium, Inc.		ANSI		
Security Manager - Information Security Analyst	Multiple - by certifying entity Multiple - by certifying entity	15-1122 15-1122	Hewlett Packard Certification and Learning IBM Corporation	> >			
Security User Support: Obersecurity - Information Security Analyst	Multiple - by certifying entity	15-1122	Global Information Assurance Certification	>			
solution de la constant de la consta	Multiple - by certifying entity	15-1122	RSA Security, Inc.	- >-			
24	Multiple - by certifying entity	15-1122	Symantec	>			
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Name	Industry-Based Certification	SOC	Certifying Entity	National Accredited Endorsed	Endorsed Licensed
Software Developer	Multiple - by certifying entity	15-1132	Environmental Systems Research Institute		
	Multiple - by certifying entity	15-1132	Hewlett Packard Certification and Learning	>	
Surgical Technologist	Certified Surgical Technologist	29-2055	National Board of Surgical Technology and Surgical Assisting	Y	
Conveying and Manajage Tachairian	Lichary Cunave - Laval	1200.11	National Inetitute for Contification in Engineering Technologies	>	
	Highway Streets - Level I	17-3031	National Institute for Certification in Engineering Technologies	- >	
	Highway Surveys - Level III	17-3031	National Institute for Certification in Engineering Technologies	- >	
	Highway Surveys - Level IV	17-3031	National Institute for Certification in Engineering Technologies	>	
	Certified Surveyor Technician: Office Track Level II	17-3031	National Society of Professional Surveyors	>-	
	Certified Surveyor Technician: Field Track Level III	17-3031	National Society of Professional Surveyors	>	
	Certified Surveyor Technician: Office Track Level III	17-3031	National Society of Professional Surveyors	>	
	Certified Survey Technician Level I	17-3031	National Society of Professional Surveyors	>	
	Certified Surveyor Technician: Field Track Level II	17-3031	National Society of Professional Surveyors	>	
The state of the s	Tueffic Contact Contact to		A annual control of the Country Annual Annua	>	
l'attic lechnician	ratic Control Specialist	53-6041	American Irattic Satety Services Association	≻ ;	
	Traffic Control Technician	53-6041	American Traffic Safety Services Association	> :	
	Table Class I Dansk Table Signal I echnician	53-6041	International Municipal Signal Association	> >	
	Traffic Simal benefict Level II	53-6041	International Municipal Signal Association	- >	
	Roadway Lighting Technician Level I	53-5041	International Municipal Signal Association	- >	
	Traffic Signal Technician Level I	53-6041	International Municipal Signal Association	- >-	
	•		-		
Transportation Inspector	Certified Safety Supervisor	53-6051	North American Transportation Management Institute	>	
1.11	A. A. Birl. b. combit in a matter.			>	
User Support - Computer User Support Specialist	Muriple - by certifying entity	15-1151	Apple Computer, Inc.	> ;	
	Multiple - by certifying entity	15-1151	Certified Wireless Network Professional	·	
	Multiple - by certifying entity	15-1151	Computing Technology Industry Association (Compile)	ANS	
	Multiple - by certifying entity	15-1151	Global Information Assurance Certification	ANSI	
	Multiple - by certifying entity	15-1151	ETA International	. ≺	
	Multiple - by certifying entity	15-1151	IQH	>	
	Multiple - by certifying entity	15-1151	Hewlett Packard Certification and Learning	>	
	Multiple - by certifying entity	15-1151	IBM Corporation	>	
	Multiple - by certifying entity	15-1151	Institute for the Certification of Computing Professionals	>	
	Multiple - by certifying entity	15-1151	Juniper Networks	>	
	Multiple - by certifying entity	15-1151	Linux Professional Institute		
	Multiple - by certifying entity	15-1151	Microsoft Corporation	Y ANSI	
	Multiple - by certifying entity	15-1151	Novell, Inc Education	>	
	Multiple - by certifying entity	15-1151	Oracle Corporation	>	
Veterinary Assistant and Laboratory Animal Caretaker	Certified Veterinary Assistant	31-9096	Texas Veterinary Medical Association	z	¥
					7.06
Veterinary lechnologist and lechnician	Licensed Veterinary Lechnician	9507-67	lexas state Board of Veterinary Medical Examiners	Z	×
Water and Wastewater Treatment Plant and System Operator	Licensed Wastewater Collection System Operators	51-8031	Texas Commission on Environmental Quality	z	¥
	Licensed Water System Operators	51-8031	Texas Commission on Environmental Quality	Z	X
- 4	** For the first constitution of the first c				
Web Developer	Multiple - by certifying entity	15-1134	Adobe Systems Incorporated	> :	
	Murtiple - by certifying entity	15-1134	Certified Internet Web Professionals	-	
Webmaster/Administrator	Multiple - by certifying entity	15-1141	Adobe Systems Incorporated	>	
	Multiple - by certifying entity	15-1141	Certified Internet Web Professionals	>	
	Annual Control of the				
Welder, Cutter, Solderer, and Brazer	Structural Steel Welder	51-4121	American Welding Society	≻ >	NAN N
	Sheet Metai weiger	7714-15	American weiging society	-	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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Raymund Paredes, Austin
Courtney Phillips, Austin
Larry Temple, Austin
Bryan Daniel, Austin

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Texas Workforce Commission

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and Tourism