

Emerging and Evolving Occupations Projected to Offer Future Employment Opportunities in North Central Texas
Emerging Occupations are new occupations in the workforce with new titles and new skills.

Evolving Occupations are traditional occupations whose knowledge, skills, and abilities have changed or evolved.
 (A) \$9.00-10.00 per hour ~ (B) \$10.00-15.00 per hour
 (C) \$15.00-20.00 ~ (D) 20.00+ per hour
 Wages listed are expected median hourly
 Education is the expected to be required



Advanced Digital Manufacturing (ADM) Technicians: Emerging Occupation - New technical breakthroughs for the pre-existing process for forming a product using a layered manufacturing process. Every ADM system consists of two parts: 1) a computer aided design system and 2) a layered manufacturing machine capable of producing a part in successive layers according to instructions from the CAD system. 2-4 yrs. (B-C)

Biotechnology Research Technicians (O*NET 19-4021.00): Emerging Occupation - Assist scientists in laboratories. Set up, operate, and maintain laboratory instruments and equipment, monitor experiments, make observations, and calculate and record results. 4 yrs. (B-C)

Composite Technicians (Bond Assembler): Evolving Occupation - Work with metals, ceramics, plastics, semiconductors, and combinations of materials called composites to create new materials that meet certain mechanical, electrical, and chemical requirements. There are numerous new developments within composite materials that make it possible to manipulate and use materials in various ways. For example, the ability to create and then study materials at an atomic level using advanced processes to replicate the characteristics of materials and their components with computers. OJT-2 yrs. (B-C)

Computer & Digital Forensics Technicians: Emerging Occupation - The science of conducting investigations related to computer crimes and abuse in a manner that is legally sound and reproducible. Using specialized hardware and software tools, computer forensics technicians gather evidence about all kinds of activity including fraud, embezzlement, child pornography, and intellectual property misappropriation. 2 yrs. (B-C)

Computer Security Specialists: Emerging Occupation - Plan, coordinate, and implement security measures to prevent unauthorized modification, destruction, or disclosure of information. Regulate users' access to computer data files and erect firewalls to keep out tainted digital transfers. These specialists use encryption coding to conceal confidential information as it is being transmitted. They also monitor reports of computer viruses and update the virus protection system as needed. 2 yrs. (B-C)

Convergence Technology Specialists/Technicians: Emerging Occupation - Combines telephony, data networking, voice over IP and hand held devices, to name a few, to solve real problems. Includes Home Technology Technicians who handle the multiple technologies needed in a home or small office environment and Convergence Technicians in large businesses who are merging legacy voice and data systems with voice over IP, wireless, etc. all in a secure environment. Note: This emerging occupation has been identified by employers on InterLink's Survey as a high demand occupation since 2007. 2-4 yrs. (C-D)

Data Mining Technicians: Emerging Occupation - Research and problem solve by burrowing through gigabytes of information in search of unanticipated patterns. 1-2 yrs. (B-D)

Electronic Commerce Specialist: Emerging Occupation - Apply knowledge of marketing and advertising to design Internet business webpages. Determine the content, layout the design specifications, and convey this information to webmasters who program the page. Electronic commerce specialists test market the webpage through on-line focus groups and surveys. They also conduct trend analyses of resulting sales and gather statistical data on customer preferences in order to improve service. 2-4 yrs. (C)

Gaming Technician: Emerging Occupation - Create 2D/3D animation through the use of high-end software for a variety of industries including entertainment, advertising and corporate communications. Advancing toward network dependent interfaces/environments. Technology is evolving the concepts of cyberspace, media, computer mediated communication and education technology. 2-4 yrs. (C-D)

Geographic Information Systems Technicians (Surveying & Mapping Technician) (O*NET 17-3031.00): Evolving Occupation - Help design and coordinate the development of integrated geographical information system databases of spatial and non-spatial data. Decide effective presentation of information and create digital maps and graphs using GIS software and related equipment. In many companies, GIS technicians gather land survey data and other topographical details needed to build the geographic databases. 2-4 yrs. (B-C)

Global Positioning Systems (GPS) Technicians: Emerging Occupation - Install, maintain, repair, and use electronic equipment that sends and receives electronic signals via satellites to determine the exact position of the sending unit. GPS devices are also used for navigating airplanes, ships, boats, and ground vehicles. Some technicians analyze GPS signals and use digital maps to locate the position of the sending signal. Cert. - 2 yrs. (B-C)

Micro-electromechanical Systems (MEMS) Technician - Emerging Occupation - Miniaturized, self contained systems that integrate electrical and mechanical functionality allowing them to gather and process information, decide on a course of action and control the surrounding environment. MEMS will have a significant effect on the development of "intelligent" products in a wide range of industries including scientific, consumer goods, defense, aerospace, medical and healthcare, and automotive. 2 yrs. (B-C)

Nanotechnology Technician: Emerging Occupation - Operate and service microscopy equipment capable of characterizing nanostructures. Must have extensive background in materials science and optics. 2-4 yrs. (B-C)

Robotics Technicians: Emerging Occupation - Robotics technicians (automated) install, program, and repair robots and related equipment, such as programmable controllers, robot controllers, end-of-arm tools, and conveyors. They review related manuals, blueprints, and schematic diagrams to determine the tasks, tools, equipment, and parts needed to complete a work order. Specific duties include inspecting installation sites, positioning the robots using hydraulic tools, attaching wires between controllers, programming the robots to perform specific tasks, and testing electronic circuitry. Those that work for robot manufacturers, also assist in design and configuration. 2-4 yrs. (B-D)

Solar Thermal Installers & Technicians (SOC: 47-4099.02): Emerging Occupation - Install or repair solar energy systems designed to collect, store, and circulate solar-heated water for residential, commercial or industrial use. Most likely evolve from solar trained electrician, 2-10 yrs.

Solar Photovoltaic (Electric) Installer: Emerging Occupation - The ideal candidate will have some construction experience, especially knowledge of basic electrical wiring with experience as a solar electric installation desirable but not required. (C-D)

North Central Texas 16 County Region
Projected Industry Growth to 2016
 Source: TWC - Compiled by InterLink
 (The current economic slowdown will affect this projected growth)

| Industry | Percentage Growth |
|--|-------------------|
| Agriculture/Forestry/Fishing/Hunting | 8% |
| Mining | 45% |
| Utilities | 0% |
| Construction | 25% |
| Manufacturing | 8% |
| Wholesale Trade | 17% |
| Retail Trade | 15% |
| Transportation & Warehousing | 17% |
| Information | 12% |
| Finance & Insurance | 20% |
| Real Estate & Rental & Leasing | 20% |
| Professional, Scientific & Technical Services | 30% |
| Management of Companies & Enterprises | 19% |
| Administrative & Support & Waste Mgt. & Remediation Services | 34% |
| Educational Services | 35% |
| Health Care & Social Assistance. | 33% |
| Arts, Entertainment & Recreation | 24% |
| Accommodation & Food Services | 28% |
| Other Services Except Government | 16% |
| Government | 19% |



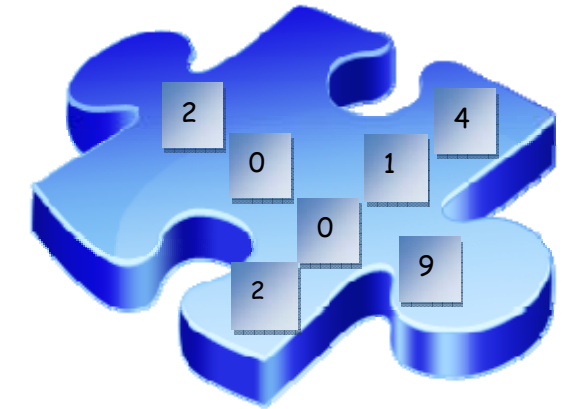
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The information included in this document is intended to be used as a guideline for high skill, high wage, and high demand occupational opportunities in North Central Texas. The absence of an occupation on this list does not necessarily preclude it from viable career opportunities. Labor market conditions change very rapidly, therefore, it is important to validate this information prior to making career choices or career program decisions. The occupations listed in this document may not be pertinent to other areas of the state or nation.

INTERLINK Est. 1987

Targeted Occupations
Identified by North Central Texas
Employers for
Long Term Growth Potential



Solving the workforce puzzle by bridging the gap between business and education

2009 InterLink Targeted Occupations for the 16 County North Central Texas Region



Agriculture, Food & Natural Products Careers

Veterinary Technicians & Technologists: Assist Veterinarian and perform medical tests in a laboratory environment for use in the treatment and diagnosis of diseases in animals. OJT-2 yrs., \$11.61/13.93



Architecture & Construction Careers

Architects: Plan and design structures, such as private residences, office buildings, theaters, factories, and other structural property. 4-10 yrs. \$17.17/31.03

Carpenters: Build or repair structures using blueprints sketches or building plans. 2-4 yrs., \$11.01/14.44

Computer Aided Design (CAD): Prepare sketches of ideas, detailed drawings, illustrations, artwork, or blueprints, using computer-aided design equipment. 2-4 yrs., \$13.42/19.24

Electricians: Read blueprints, design, and install electrical wiring and equipment in all phases of construction. 2-10 yrs. \$14.31/18.43

Heating/AC Technicians: Climate control professionals that design operate and maintain heating and cooling systems. 1-5 yrs. \$13.03/17.23

Maintenance Repairers, General Utility: Keep machines, mechanical equipment, and/or structure of an establishment in repair. OJT-4 yrs., \$9.41/13.97

Operating Engineers & Other Heavy Equipment Operators: Operate power construction equipment. May repair and maintain equipment in addition to other duties. 1-2 yrs + OJT, \$11.52/14.40

Plumbers/Pipefitters/Steamfitters: Assemble, install, altar and repair pipe systems that carry water, steam, air or other liquids or gases. 5 yrs. + OJT, \$13/33/20.14

Welders/Cutters/Solders/Brazers: Use hand-welding, flame-cutting, hand soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products. Certification-4yrs., \$10.50/13.48



Arts, AV Technology & Communication Careers

Multimedia Artists & Animators: Create special effects, animation, or other visual images using film, video, computers, or other electronic tools and media. 2-4 yrs., \$12.98/17.11



Business Management & Administration Careers

General and Operations Managers: Plan, direct, or coordinate the operations of companies or organizations. 4-10 yrs., \$25.05/43.77



Education & Training Careers

Teachers, Elementary: Teach basic academic, social, and other formative skills. 4-10 yrs. \$42,623

Teachers, Secondary: Instruct in one or more high school subjects such as English, mathematics, social studies, vocational programs, according to subject matter specialty. 4-10 yrs. \$42,990

Teachers, Special Education: Teach school subjects to students with learning differences including audibly and visually handicapped students. 4-10 yrs., \$45,997



Finance Careers

***Accountants, Auditors, & Bookkeepers:** Examine, analyze, and interpret accounting records to advise and/or prepare financial and budgetary data for individuals or businesses. 4-10 yrs. \$18.41/27.29

Financial Managers (includes Client Relationship & Project Managers): Plan, direct, and coordinate accounting, investing, banking, insurance, securities, and other financial activities. 4-10 yrs., \$31.54/48.73



Health Science Careers

Medical & Clinical Lab Technician & Technologists: Perform tests for the detection, diagnosis, and treatment of disease. Technician – 2 yrs, Technologist – 4 yrs., \$22.21/28.55

***Medical Records/Health Information Technicians:** Compile, process, and maintain medical records of hospital and clinic patients. 2-4 yrs., \$10.42/13.62

***Medical Transcriptionists:** Use transcribing machines to transcribe dictated reports of medical personnel and translate medical jargon and abbreviations into their expanded forms. Cert.-2yrs., \$12.61/17.03

Nurses - Licensed Practical/Vocational: Care for ill, injured, convalescent, and handicapped persons in hospitals, clinics, private homes, and similar institutions. (Note: Many hospitals are moving away from LVN's and hiring only RN's & BSN's.) 2 yrs., \$18.88/19.12

Nurses - Registered Nurses: Administer care to ill or injured persons in hospitals, clinics, private homes, and similar institutions. 4-10 yrs. \$22.21/28.55

Patient Care Technicians (Certified) (Also Nurse Assistants/Nurse Aides): Provide basic patient care under direction of nursing staff. OJT- \$8.25/10.38

Pharmacists: Fill prescriptions and act as member of primary health team. 5-6 yrs., \$42.40/52.11

***Pharmacy Technicians:** Work under supervision of licensed pharmacists to perform technical and clerical duties of the pharmacy including filling prescriptions. 2 yrs., \$10.94/13.77

Physical Therapists: Assess, plan, organize, and participate in rehabilitative programs that improve mobility, relieve pain, increase strength, and decrease or prevent deformity of patients suffering from disease or injury. 4-10 yrs., \$27.40/36.27

Radiologic Technologists & Technicians: Use diagnostic imaging to view and diagnose images of the interior of the body. 2-4 yrs., \$18.81/25.68

Respiratory Care Technicians (Certified): Conduct diagnostic tests of patients' cardiopulmonary functions and give appropriate treatment as ordered by a physician. 1-4yrs., \$20.21/23.29



Hospitality & Culinary Careers

Chefs or Head Cooks: Plan, price, direct and/or prepare foodstuffs in restaurants. 2-4 yrs., \$13.42/19.24

Food Service Managers: Plan, direct, or coordinate activities of an organization or department that serves food and beverages. 2-4 yrs., \$17.50/23.97



Information Technology Careers

***Computer Support Specialists:** Provide technical assistance to computer system users in person or remotely including the use of computer hardware and software. 2-4 yrs., \$12.99/20.43

***Computer Systems Analysts:** Analyze science, engineering, business, and all other data processing problems for application to electronic data processing systems. May analyze or recommend commercially available software. 4 yrs., \$23.66/36.91



Law, Public Safety, Corrections, & Security Careers

Correctional Officers and Jailers (Deputy Guards): Guard inmates in penal or rehabilitative institutions and in transit. 3-6 mos. \$12.80/15.72

Emergency Medical Technicians/Paramedics: Assess injuries, administer emergency medical care, extricate trapped individuals, and transport to medical facilities. Certification-2 yrs., \$10.54/14.11

Fire Fighters: Control and extinguish fires or respond to emergency situations where life, property, or the environment is at risk. 2-4 yrs., \$16.61/22.52

***Paralegal/Legal Assistant:** Assist lawyers by researching legal precedent, investigating facts, or preparing legal documents. 2-4 yrs., \$16.28/22.33

Police & Sheriff's Patrol Officers: Maintain order, enforce laws/ordinances. Patrol, direct traffic, issue summons, investigate, apprehend, and arrest. 1-4 yrs., \$18.54/24.37



Manufacturing Careers

Advanced Manufacturing Machinist Technician - includes Computer Numeric Control (CNC): Use machine tools and technology to produce precision products for aerospace parts, automobile parts, machine parts, and compressors. 1-2 yrs., \$9.50/13.93



Marketing, Sales & Service Careers

Advertising/Marketing Sales Managers: Formulate marketing policies, direct sales activities, plan, organize, and direct advertising and public relations activities. 4-10 yrs., \$23.74/43.54



Science, Technology, Engineering & Mathematics Careers

Aerospace Engineers: Perform designing, constructing, and testing aircraft, missiles, and spacecraft including basic and applied research to evaluate adaptability of materials and equipment to aircraft design and manufacture. 4-10 yrs., \$44.39/45.33

Civil Engineers: Plan, design and oversee construction and maintenance of building structures, and facilities, such as roads, railroads, airports, bridges, harbors, channels, dams, irrigation projects, pipelines, power plants, water and sewage systems, and waste disposal units. Includes architectural, structural, traffic, ocean, and geo-technical engineers. 4-10 yrs., \$24.42/34.87

***Computer Software Applications Engineers and Systems Software Engineers:** Research, design, develop, and test operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computing applications. 4-10 yrs., \$30.22/41.91 & \$29.26/30.19

***Electrical & Electronic Engineers:** Design, develop, test, and supervise the manufacturing and installation of electrical and electronic equipment, components, or systems for commercial, industrial, military, or scientific use. 4-10 yrs. \$40.38/41.15

***Electrical & Electronic Engineering Technicians:** Help to design, develop, test, and manufacture electrical and electronic equipment May work in product evaluation and testing. 2-4 yrs. \$18.18/25.68

*** Mechanical & Industrial Engineers:** Perform engineering duties in planning and designing tools, engines, machines, and other mechanically functioning equipment. Oversee installation, operation, maintenance, and repair of equipment and systems. 4-10 yrs., \$27.00/38.39



Transportation, Distribution & Logistics Careers

Automotive Technicians: Adjust, repair, and overhaul automotive vehicles using computer diagnostic equipment. 2-4 yrs. \$10.40/16.13

Automotive Body Repairer: Use special equipment and technology to restore damaged metal frames and body sections. 2- 4 yrs. \$10.43/14.23

Diesel Engine Technicians: Repair and maintain trucks, buses and heavy equipment using computer diagnostic equipment. 2-4 yrs., \$10.40/17.57

Transportation, Distribution & Managers (Cargo/Freight): Monitor inventory levels, planning, directing distribution, and customer relations. 2-4 yrs., \$22.93/34.17

Truck Drivers, Heavy: Drives 3+ ton trucks; prepares paperwork; collects payments for goods delivered. 3-6 mos., \$12.25/17.43

Required State Selection Criteria:

- 1) \$13.92 median entry level hourly;
 - 2) 21.5% growth rate or high industry demand;
 - 3) Wages listed are regional entry level hourly and regional median entry level hourly.
- Education time is the minimum required for entry level to the highest expected degree.

* Indicates potential for offshore outsourcing



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