

# Leadership NISD

November 2021



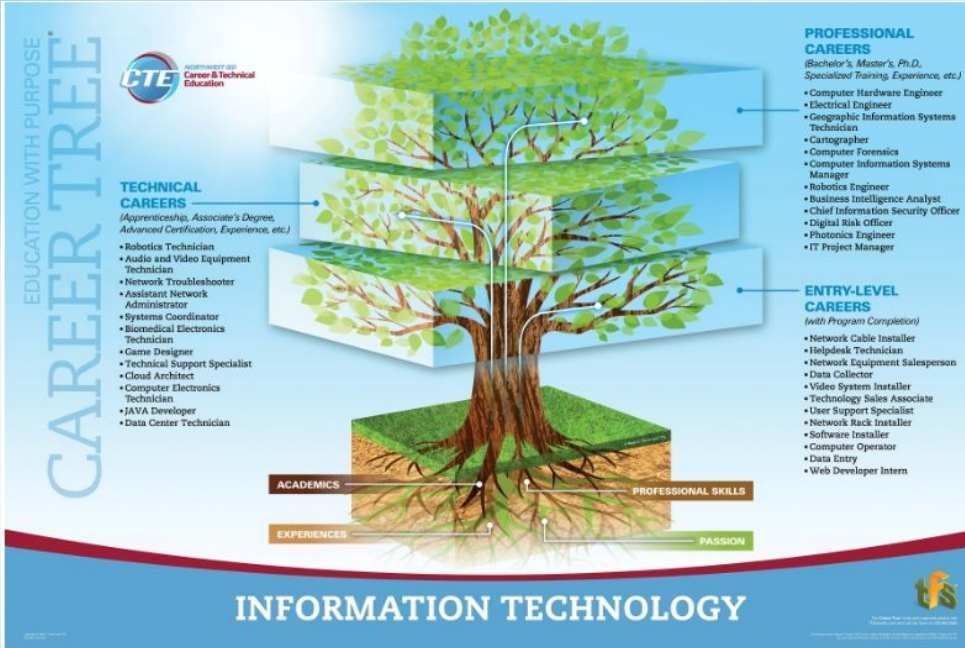
### 27 Opportunities

Agricultural Design and Fabrication	Education and Coaching
Agricultural Sciences	Emergency Medical Technician
Architectural Design	Engineering Dynamics
Aviation and Aeronautics Academy	Floral Design
Biomedical Sciences Academy	Health Sciences
Business Administration	Information Technology
Business and Entrepreneurship Academy	Interior Design
Collegiate Academy	Investment Banking and Finance
Cosmetology Academy	Marketing Dynamics
Counseling and Mental Health	Microsoft Master
Creative Media Production Academy	Software Design and Development
Culinary Arts and Hospitality Academy	STEM Academy
Digital Media	Veterinary Medicine
Early Childhood Development	

**ASPIRE. ADVANCE. ACHIEVE.**

We offer 27 different opportunities in the way of programming. Many of these opportunities have additional programs of study (this is the state name for a set of four courses that concentrate on specific training).

Example Creative Media productions Academy is 1 opportunity that has three distinct programs of study in graphic design, TV/film, and commercial photography.



Our career tree conversations help students navigate each of the programs of study available for their future while reinforcing the skills necessary to navigate any future decisions. We ensure all of our programming supports the root system of our tree with strong academics, professional skills, experiences and passion.



# Building real skills NOW!



We offer four levels of courses for every program of study (all 27 opportunities have a entry point for training)!

These icons represent how each program of study evolves for a student to prepare to meet the demands of the root system of the career tree. When looking over the academic planning guide you will see these icons to help guide the conversation about what that course covers/offers.

## WE CERTIFY HERE.



## Certification Growth:

2015 = 83

2018 = 3,086

2020 = 3,243

**3,200+**

Certification growth due to alignment of programs and increased access to opportunity.



# Internships

At Northwest ISD CTE, we believe every student should get real: real academics, real skills, and a real high school experience unlike any other. By combining strong academics with robust career-minded education, we expand students' options and opportunities to make them truly future ready. Together with parents, business leaders and the community, we challenge all students to aspire to their full potential, advance with rigorous academic and technical skills, and achieve a real-world competitive advantage.

The Internship program is designed to expose students to real world situations and develop skills that will prepare them to make decisions about their post-secondary future. It is the capstone course for students that are completing a coherent sequence of courses within their specific career pathway and it is divided into three important components: classroom instruction, workplace instruction, and credentialing certifications.

## Program Objectives:

- To assist students in making career choices - This includes exploring today's job market, setting personal goals, and developing an individual career portfolio.
- To assist students in basic workplace practices - This includes safety, workplace ethics, communication skills, and professionalism training.
- To assist students in professional development - This includes work relationship training, leadership skill development, problem-solving and thinking-skill development, technology applications, and time management skill development.
- Students will work toward industry recognized certifications in their field of study (examples: OSHA, CVA Level I and Microsoft certifications)

If you are interested in becoming an instructional worksite for our interns, please let us know and we will contact you with more details!



**NORTHWEST ISD**  
**Career & Technical**  
**Education**

More than 300 students annually receive internship/field experiences with more than 60 business and industry partners.

**PROUD**  
**INTERN PARTNER**  
FOR **NORTHWEST ISD**





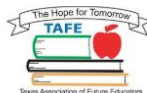


# Student Enterprises



The competitive advantage starts at home... We offer student run business opportunities to practice our real skills while giving back to our community. The professional opportunities are high quality and work to ensure industry standards.

## Student Organizations



Applied extended learning opportunities exist for our students.

Our Career and Technical Student Organizations are designed to help students take theoretical learning with practiced technical skills and apply them in competitive settings, while promoting scholarship and achievement.





# CTE Ambassadors

## Frequently Asked Questions

### **What is a CTE Ambassador?**

A CTE Ambassador is a student who is "the face" of Career and Technical Education (CTE) in NISD. They champion their CTE program or academy and strive to gain a competitive advantage through this leadership opportunity.

### **How were CTE Ambassadors nominated?**

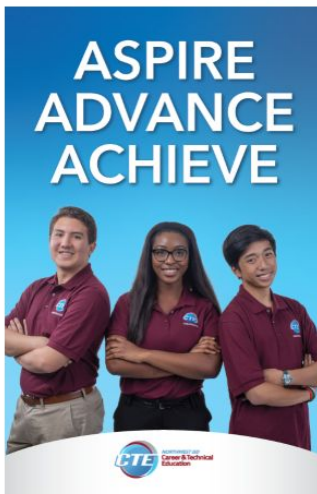
CTE teachers at each of the four high school campuses nominated up to three students in their program.

### **What do students "get" out of being a CTE Ambassador?**

CTE Ambassadors develop professional skills such as networking, public speaking and leadership, accrue volunteer hours, and network and build friendships across NISD campuses.

### **What role do CTE Ambassadors play on your campus?**

CTE Ambassadors can be beneficial to your campus in a variety of ways: by sharing their story with your teachers/students/parents, giving campus tours, hosting evening events such as CTE Showcase, serving on advisory teams, helping students develop their own competitive advantage.



**NORTHWEST ISD**  
**Career & Technical**  
**Education**

Our CTE ambassador program has more than 90 students who champion CTE across the district. They not only tell their story but help others discover what opportunities are available.

# 2019~2024 InterLink High Demand Occupations

## Identified by North Central Texas Employers

Data Source: EMSI, Texas Workforce Commission, Bureau of Labor Statistics, InterLink Regional Employer Labor Market Survey, InterLink Task Forces

Industry Cluster ~ Job Title	Regional Median Hourly Earnings	Regional Experienced Hourly Earnings	Typical Entry Level Education
<b>Agriculture, Food and Natural Resources</b>			
Veterinary Technologists and Technicians	\$15.99	\$23.20	Associate's degree
<b>Architecture and Construction</b>			
Electricians	\$20.41	\$31.98	High school diploma or equivalent
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$20.83	\$33.69	Postsecondary nondegree award
Maintenance and Repair Workers, General	\$18.21	\$28.08	High school diploma or equivalent
Operating Engineers and Other Construction Equipment Operators	\$18.60	\$25.87	High school diploma or equivalent
Plumbers, Pipefitters, and Steamfitters	\$21.72	\$32.12	High school diploma or equivalent
Welders, Cutters, Solderers, and Brazers	\$18.04	\$27.91	High school diploma or equivalent
<b>Business, Marketing and Finance</b>			
Accountants and Auditors	\$35.27	\$59.99	Bachelor's degree
Financial Analysts	\$39.94	\$66.53	Bachelor's degree
Insurance Claims and Policy Processing Clerks	\$18.84	\$29.75	High school diploma or equivalent
<b>Education and Training</b>			
Elementary School Teachers, Except Special Ed.	\$28.23	\$37.10	Bachelor's degree
Secondary School Teachers, Except Special and Career/Technical Education	\$29.01	\$38.49	Bachelor's degree
<b>Health Science</b>			
Clinical Laboratory Technologists and Technicians	\$25.35	\$39.47	Associate's degree
Licensed Practical and Licensed Vocational Nurses	\$22.54	\$30.70	Postsecondary nondegree award
Medical Assistants	\$15.77	\$20.32	Postsecondary nondegree award
Medical Records and Health Information Techs.	\$19.49	\$34.07	Postsecondary nondegree award
Nursing Assistants	\$12.30	\$17.77	Postsecondary nondegree award
Patient Care Technicians (PCT)	\$9.29	\$12.42	High school diploma or equivalent
Pharmacy Technicians	\$15.38	\$22.55	High school diploma or equivalent
Radiologic Technologists	\$28.95	\$39.31	Associate's degree
Registered Nurses	\$35.42	\$48.50	Bachelor's degree
Respiratory Therapists	\$29.73	\$38.28	Associate's degree
<b>Hospitality and Tourism</b>			
Chefs and Head Cooks	\$23.67	\$40.00	High school diploma or equivalent
Food Service Managers	\$21.34	\$43.82	High school diploma or equivalent
<b>Information Technology</b>			
Computer Network Architects	\$56.45	\$79.45	Bachelor's degree
Computer Systems Analysts	\$44.05	\$70.11	Bachelor's degree
Information Security Analysts	\$44.15	\$71.11	Bachelor's degree
Network and Computer Systems Administrators	\$43.37	\$64.56	Bachelor's degree
Software Developers, Applications	\$52.68	\$74.50	Bachelor's degree
Software Developers, Systems Software	\$51.86	\$75.21	Bachelor's degree
<b>Law and Public Service</b>			
Emergency Medical Technicians and Paramedics	\$19.39	\$28.72	Postsecondary nondegree award
Firefighters	\$27.46	\$41.32	Postsecondary nondegree award
Paralegals and Legal Assistants	\$28.32	\$42.96	Associate's degree
Police and Sheriff's Patrol Officers	\$33.43	\$45.16	High school diploma or equivalent

## BY THE NUMBERS

### A SKILLS GAP SAMPLER

#### WORKFORCE

# 67%

The percentage of employers who can't find qualified candidates

# 60%

The percentage of employers who have vacancies for twelve weeks or longer

#### COLLEGE

# 11%

The percentage of business leaders who say they are confident college grads will be prepared for the workplace

#### TECH/SCIENCE

# 14X

The rise of tech and the demand for big data, has created a skills shortage. For example, in 2012, there were just 1,061 job postings for data scientists. By 2016, that had grown 14-fold, to 14,653.

#### HEALTH CARE

# 1.04m

The number of skilled health care jobs currently unfilled

SOURCE: Burning Glass Technologies; Gallup; CareerBuilder; US Bureau of Labor Statistics.



**NORTHWEST ISD**  
Career & Technical Education

Just a small look at the numbers... the why behind the work.

Skilled  
Credentialed  
**READY**



Your Education Just Got Real.

NORTHWEST ISD  
Career & Technical Education





**NORTHWEST ISD**  
Career & Technical  
Education

We design  
programming to  
support the  
needs of our  
students and  
community.

Manufacturing			
Machinists	\$18.88	\$29.50	High school diploma or equivalent
STEM			
Civil Engineers	\$41.18	\$69.45	Bachelor's degree
Electrical Engineers	\$47.08	\$75.32	Bachelor's degree
Industrial Engineers	\$46.80	\$69.77	Bachelor's degree
Mechanical Engineers	\$43.55	\$75.31	Bachelor's degree
Video Game Designers	\$44.35	\$62.24	Bachelor's degree
Transportation, Distribution and Logistics			
Aircraft Mechanics and Service Technicians	\$29.54	\$47.32	Postsecondary nondegree award
Airline Pilots, Copilots, and Flight Engineers	\$75.51	\$175.49	Bachelor's degree
Automotive Body and Related Repairers	\$18.63	\$31.91	High school diploma or equivalent
Automotive Service Technicians and Mechanics	\$16.05	\$29.73	Postsecondary nondegree award
Diesel Engine Specialists	\$22.35	\$31.54	High school diploma or equivalent
Transportation, Storage, and Distribution Mgrs.	\$43.82	\$76.37	High school diploma or equivalent

InterLink Emerging and Evolving Occupations		
Projected to Offer Future Employment Opportunities		
Emerging Occupations are new occupations in the workforce with new titles and skills		
Evolving Occupations are traditional occupations whose knowledge, skills, and abilities have changed or evolved		
SOC Code/O*Net Code	Occupation Title	Industry
19-1021	Biochemists	Science
19-4021	Biological Technicians	Science
15-1199.08	Business Intelligence Analysts/Operations Research Analyst	Information Technology
15-1199.02 Emerging	Cloud Computing Architects	Information Technology
Evolving	Convergence Technology Spec. /Techs.	Information Technology
15-1111 - Emerging	Data Scientists including Advanced Analytics	Information Technology
17-3024	Drone Operators/ Remotely Piloted Vehicle Engineering Techs. (Unassisted Air Vehicles)	Transportation
17-3025.00	Environmental Engineering Technicians	Engineering
19-4092.00	Forensic Science Technicians (Computer & Digital)	Information Technology
17-3029.10	Fuel Cell Technicians	Energy
29-9092	Genetic Counselors	Health Science
19-1029.03	Geneticists	Health Science
13-2099.02	Market Research Analysts & Marketing Specialists	Business
17-2131.00	Materials/Smart Materials Analysts/Engineers	Science
17-2199.09	Nano Systems Engineers	Engineering
17-3029.12	Nanotechnology Engineering Technicians	Technology
17-3029.11	Nanotechnology Engineering Technologists	Technology
19-4099.01	Quality Control Analysts	Information Technology
19-4099.03	Remote Sensing Technicians	Information Technology
13-2099.02	Risk Management Specialists (Risk Analysts)	Business
17-3024.01	Robotics Technicians - Electro Mechanical Technician	Technology
47-2231	Solar Photovoltaic (Electric) Technicians Installers	Construction
Emerging	Virtual Reality Engineers/Specialists/Technicians	Technology
49-9081	Wind Turbine Service Technicians	Construction

#### CASE STUDY

### THE SKILLS GAP IN MANUFACTURING

The lack of properly trained workers can stunt economic growth. Here's one sector that's struggling to fill its talent pipeline.

#### FACT

**6 out of 10**

open skilled production positions remain unfilled due to the skills gap...

...and, thus, it can take longer to find qualified employees.

#### FACT

**3.5 Million**

manufacturing jobs must be filled in the decade from 2015 to 2025...

...but 2 million of those positions will go unfilled due to the talent shortage.

#### TIME IT TAKES TO RECRUIT HIGHLY SKILLED WORKERS

Skilled production workers

**70 Days**

Engineers, researchers, scientists

**94 Days**

Other workers

**48 Days**

#### WHY DOES THIS MATTER?

Every manufacturing job creates 2.5 new positions in local goods and services... and for every \$1 invested in manufacturing, another \$1.40 worth of value is created in other parts of the economy.

#### SKILLS GAP BOOM

Unfilled jobs due to the skills gap:

**600K** vs. **2M**  
in 2011 by 2025

#### THE GAP

The skills executives say current employees lack.

**70%**  
of executives say current employees lack tech/ computer skills

**69%**  
of executives say current employees lack problem solving skills

**67%**  
of executives say current employees lack basic technical skills

**60%**  
of executives say current employees lack math skills

#### THE IMPACT

**82%**  
of execs say the skills gap will adversely affect their ability to keep up with demand

**78%**  
believe they won't be able to implement new tech and increase productivity

**69%**  
say the talent shortage will undercut customer service

**62%**  
contend innovation and the development of new products will be harmed.

**48%**  
say the skills deficit will slow international expansion

SOURCE: Deloitte/The Manufacturing Institute





#### T-2-M-4 Tools

When running a race, what do runners do when they cross the finish line? They stop running. T2M4 is an awareness program built upon the idea that high school graduation, college acceptance, and starting a job are changes in the direction of the race, but they are not the finish line. In other words, we want our graduates to keep running the race.

At NISD we want our students to think about their future in terms of T-2-M-4



- **Technical Training and Certifications**



- **2-Year Degree Programs**



- **Military Occupations**



- **4-Year University Experience**

All are great options and we are committed to making students ready for whichever they choose.

Because of this, NISD is expanding course offerings to include Career and Technical courses through 8 Academies and 19 pathways that allow student to earn specialized career certifications, and participate in internships that will make them highly competitive in the job market, and college-level classes through Advanced Placement, UT OnRamps, and Dual Credit, that offer the potential of earning college credit as well as high school credit.

In doing this, we know that we will be preparing our students to live locally and compete globally.



We believe all students need to choose postsecondary training. Some of this training may occur while still in high school, however each student needs postsecondary options and to be prepared for whichever option they choose.

Based on programming, labor market research and community expectations we provide opportunities for the next step!

# A few highlights...



- Nearly 80% of all high school students participate in CTE and 90% of middle school students. District-wide CTE students currently fill **10,320 seats**.
- **Middle School CTE** has grown to offer **8 different CTE courses** including Lifetime Nutrition, STEM Computer Science & Digital Art Animation
- All programming is **free and accessible** to all students and busing is provided for your academy of choice.
- Our **ag science programs** have over **1,100 students** who receive specialized training in leadership, welding/construction, veterinary medicine, and horticulture.
- Our Education Programs certified 90% of Seniors with **Educational Aide I** in 2020 and will be offering **Dual-Credit Education** in 22-23
- Our Education Program currently has **148 future educators interning** throughout NISD campuses as NISD works to “Grow Your Own” Teachers.
- Our **Creative Media Productions academy** is continually featured for the work our students produce and our graduates are constantly sought after.

# A few highlights...



- Our **business academy** has produced the top **Junior Achievement** companies that have gone on to be nationally ranked with students starting their own companies.
- Our **aviation academy** is certifying Private Pilots, Aviation Mechanics and for the first time will certify Drone Pilots this year.
- Our **Biomedical Science** academy has been featured as a demonstration site for **Project Lead the Way**, and our facilitator was named the **Biomed teacher of the year for PLTW**.
- Our Culinary Academy was the first High School in Texas to receive the **American Culinary Federation (ACF)** accreditation which is the top accrediting body for culinary education in the country.
- Our **Cosmetology academy** has a **100% pass rate** for all licensed cosmetologist and will now begin including a Barbers license as well for dual certification.
- Our **STEM academy** has **100%** of its students who complete the academy with at least **1 Industry-based credential**, however more than half complete 2 IBC's and give more than 70 presentations throughout their high school career.