



NEW
BRAUNFELS
ISD

Facilities Planning

Career & Technical Education

March 2, 2021





Agenda and Objectives

- CTE Overview
- CTE Programming /JROTC Programming
- Logistics and Equity
- Program considerations
- Next Steps

We will review information related to programming and collaboratively gather feedback to determine recommendations to be included in the presentation to the NBISD Board of Trustees.

I will actively participate in discussions and decision making related to specialized programming at the new high school.





NEW BRAUNFELS

CTE Overview





What is CTE?

Vocational
Education
(Voc-Ed)

Career and
Technology
(CATE)

Career &
Technical
Education
(CTE)

*Post-It note
perceptions*

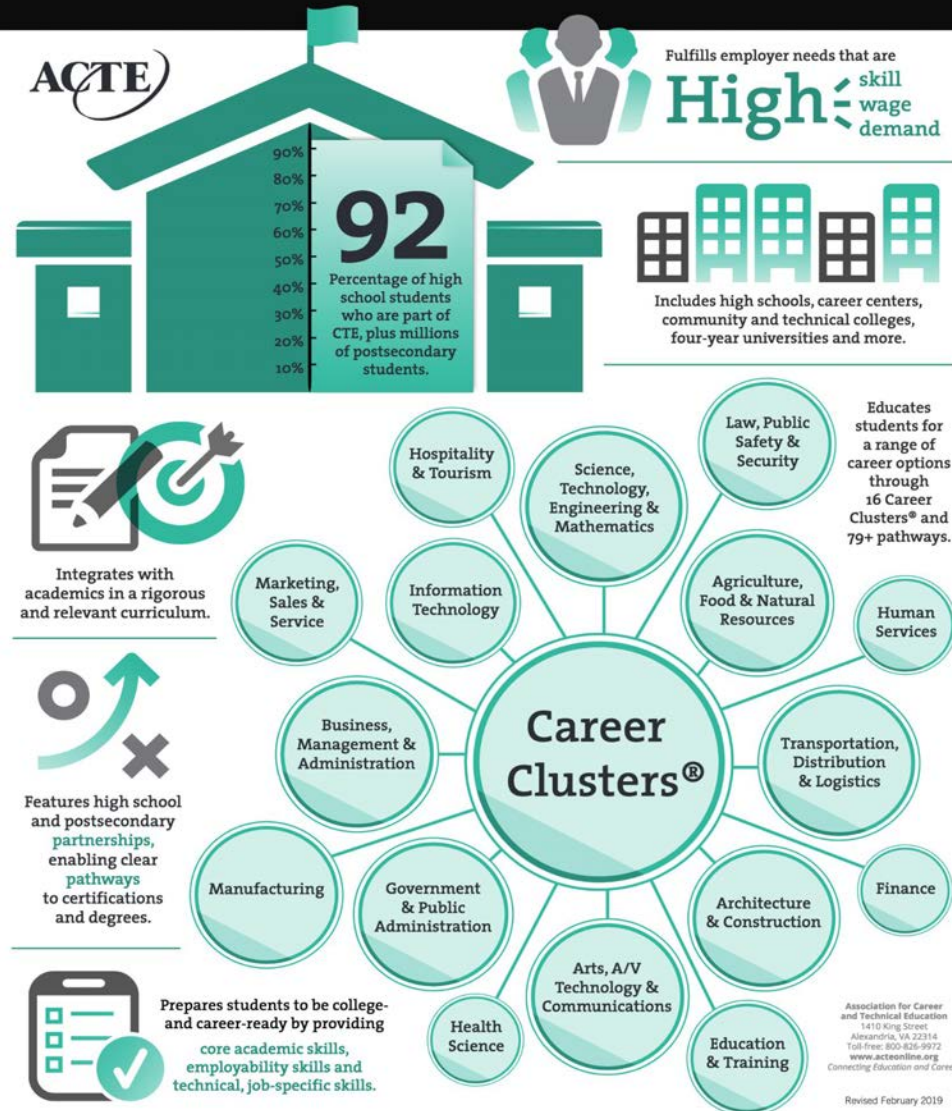


What is CTE?

| VOCATIONAL EDUCATION WAS: | CAREER TECHNICAL EDUCATION IS: |
|---|--|
| Basic academics with technical skills related to specific jobs | Integration of high-level academics with technical training to enter jobs or college |
| Primarily for non-college goers (only Career ready) | For anyone interested in the field (College AND Career ready) |
| Based on an assumption that individuals will always work in the same occupation | Preparation for a changing workplace, including the ability to change careers |
| For “some” or “those” kids | For ALL kids |



What is Career and Technical Education?



What is CTE?

- What percentage of students in NBISD grades 9-12 are participants in CTE? _____
- What Career Clusters are currently offered in NBISD?



Which area
has the
highest
enrollment
numbers?

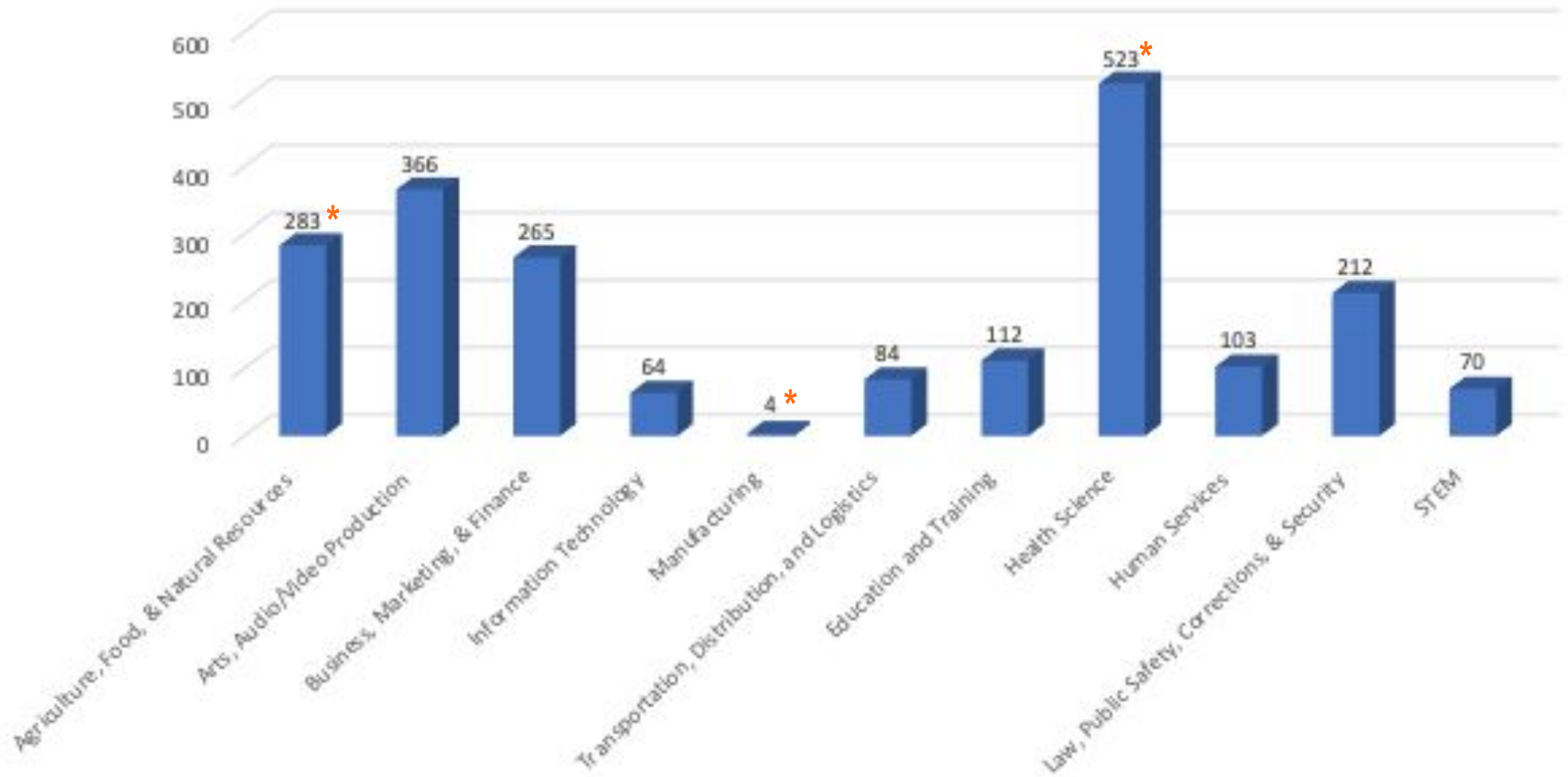
16 CTE Career Cluster areas

| Career Cluster | Example courses |
|---|---|
| Agriculture, Food & Natural Resources | Animal Science, Plant Science, Ag Mechanics, Ag Fabrication |
| Architecture & Construction | Do not currently offer in NBISD |
| Arts, Audio/Video Technology & Communication | Speech, Animation, Graphic Design, Commercial Photography, Audio/Video Technology |
| Business Management & Administration | Business Information Management, Global Business |
| Education and Training | Instructional Practices, Child Development |
| Finance | Accounting, Statistics and Business |
| Government & Public Administration | Do not currently offer in NBISD |
| Health Science | Medical Terminology, Pathophysiology, Pharmacology, Practicum |
| Hospitality and Tourism | Do not currently offer in NBISD |
| Human Services | Human Growth and Development, Counseling & Mental Health |
| Information Technology | Computer Science 1, Web Design |
| Law, Public Safety, Corrections & Security | Law Enforcement, Forensic Science |
| Manufacturing | Robotics |
| Marketing | Social Media Marketing, Entrepreneurship |
| Science, Technology, Engineering & Mathematics (STEM) | AP Computer Science Principles, Engineering Design and Problem Solving |
| Transportation, Distribution and Logistics | Automotive Technology |



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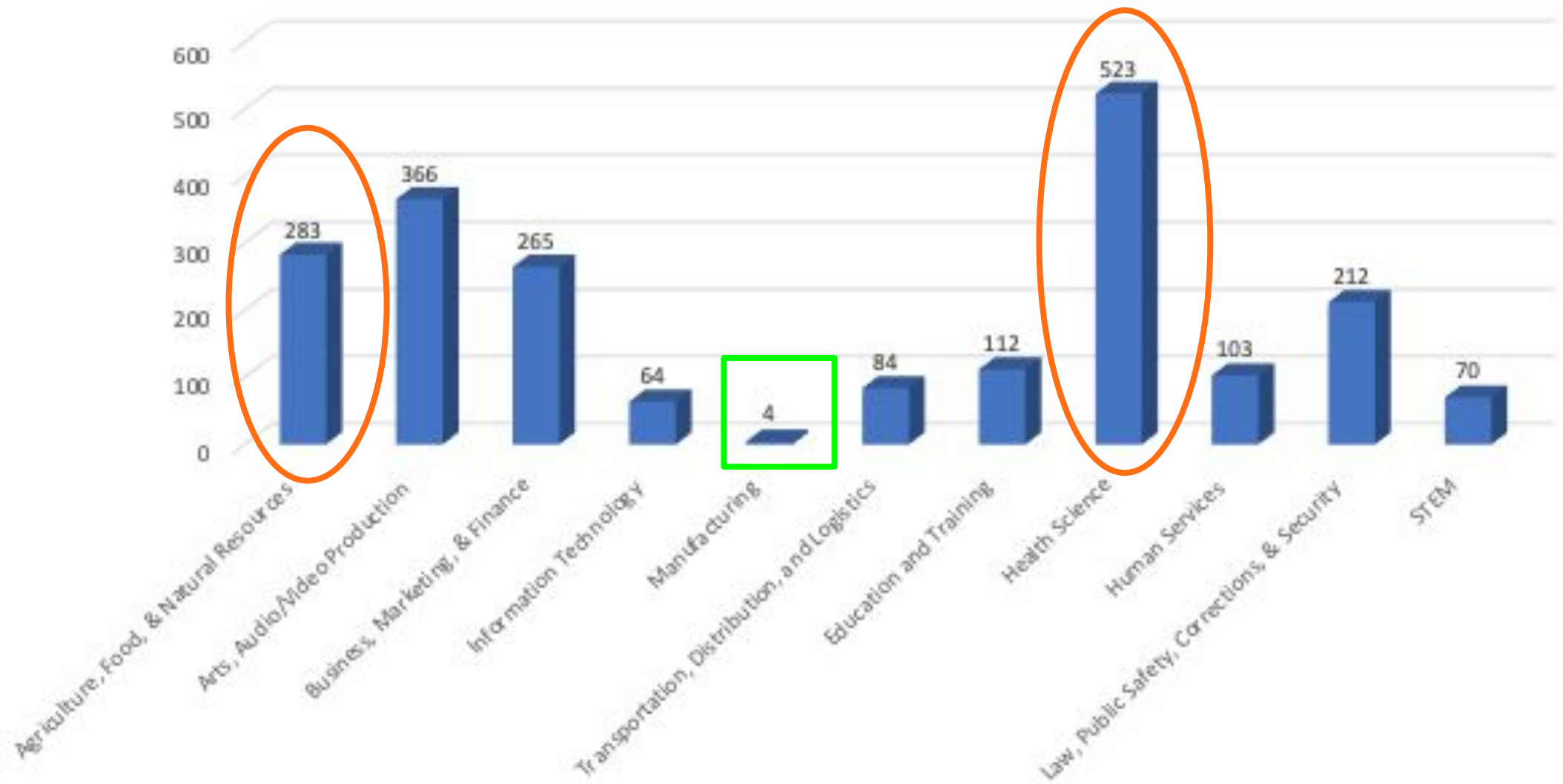
Current CTE Enrollment by Career Cluster





NEW BRAUNFELS

Current CTE Enrollment by Career Cluster





CTE Courses

- Within the 13 Career Clusters found in NBISD, we currently offer about 90 unique CTE courses
 - 28 CTE teachers
 - Many teach across multiple career clusters, most teach at least 3 different courses, and some teach up to 5 different courses, or “preps”

All courses can be found in course catalog found on the high school website under [Student Resources](#).





New Braunfels
Independent School District

Industry Based Certificate Opportunities and Related Courses

Industry Certifications are subject to change. Contact CTE Director for more details: rbehnke@nbsisd.org

Business and Industry Endorsement

Agriculture, Food and Natural Resources

| Certification | Course |
|---|--|
| Hunter Safety Education | Wildlife, Fisheries & Ecology Management |
| Texas Beef Quality Assurance | Livestock Production |
| OSHA - 10-hour General Industry | Ag Structures, Ag Power |
| Texas State Florist Association Level 1 | Floral Design |

Arts, Audio/Video Technology and Communication

| Certification | Course |
|---|-----------------------------|
| Adobe Certified Associate (ACA) in Photoshop | Photography, Graphic Design |
| Adobe Certified Associate (ACA) in InDesign | Graphic Design |
| Adobe Certified Associate (ACA) in Illustrator | Graphic Design |
| Adobe Certified Associate (ACA) in Premiere Pro | Audio/Video Production |
| Autodesk Maya Certified User | Animation |

Business, Finance and Marketing

| Certification | Course |
|--|------------|
| Microsoft Office Specialist (MOS) in Excel | BIM 2 |
| QuickBooks | Accounting |

Transportation

| Certification | Course |
|--|--|
| ALLDATA Certified Automotive Information Specialist (CAIS) | All Auto Tech classes |
| Automotive Service Excellence (ASE) - multiple opportunities | Auto Tech 2 and Practicum in Auto Tech |
| S/P2 Safety (Mechanical Safety & Pollution Prevention) | All Auto Tech classes |

Public Service Endorsement

Health Science

| Certification | Course |
|------------------------------------|--|
| OSHA - 10-hour Healthcare Industry | Health Science Practicum: Clinical Rotations |
| Heart Saver First Aid CPR, AED | Health Science Theory |
| Pharmacy Technician | Pharmacology |
| Certified Medical Assistant | Health Science Practicum: Clinical |
| Phlebotomy Technician, Certified | Health Science Practicum: Clinical |

Law Enforcement

| Certification | Course |
|---------------------------------|-------------------|
| OSHA - 10-hour General Industry | Law Enforcement 2 |
| Heart Saver First Aid CPR, AED | Law Enforcement 2 |

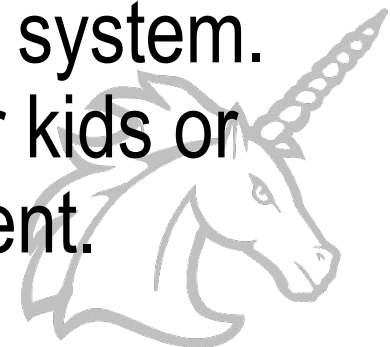
STEM Endorsement

Engineering: Robotics

| Certification | Course |
|--|----------|
| StartSafe.StaySafe. Workplace training | Robotics |






CTE Industry Based Certifications

- Currently offering approximately 16 unique Industry-Based Certification (IBC) opportunities
 - It is a goal at federal, state and local levels to increase this number
- Several IBCs count towards the state A-F Accountability system. Others are just good for kids or meet another requirement.



CTE Courses

- 200+ students involved in five Career and Technical Student Organizations (CTSOs)

| | | |
|---|--|---|
|  | FFA (Formerly – Future Farmers of America) | Agriculture |
|  | FCCLA (Family, Career and Community Leaders of America) | Education Child Development Nutrition Human Services |
|  | HOSA (Formerly - Health Occupations Students of America) | Health Science |
|  | BPA (Business Professionals of America) | Business Marketing Finance Animation Graphic Design Information Technology |
|  | SkillsUSA | Law Enforcement Automotive Technology |





Based on the information presented, did anything change or support your initial “Post-It perception” about CTE?





NEW

CTE Programming



Current CTE Programming

The original build-out program for the second high school was created about 10 years ago

- What has changed since then?
 - House Bill 5
 - House Bill 3
 - Accountability system
 - Funding methods
 - Attendance minutes





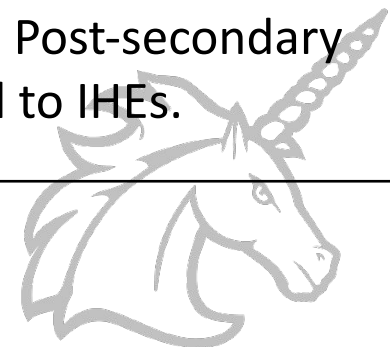
What has changed?

Impact of Texas Graduation Requirements

| Year | Default Graduation Plan | Expectation | Impact on Instruction |
|------|---|---|--|
| 2010 | Recommended High School Plan (MHSP, RHSP, DHSP) | *Graduation assessment... measure(s) academic preparation for graduation from high school as well as readiness to enroll in an institution of higher education. | Prepare students for institutions of higher education. |
| 2021 | Foundation High School Program with Endorsements (FHSP w/endorsements) | **Graduation assessment... measure(s) the extent to which a student has learned and is able to apply knowledge and skills defined in state-mandated curriculum, the TEKS...and to measure post-secondary readiness. | Prepare students to either pursue a traditional path into colleges and universities or move directly into the workforce. Post-secondary not limited to IHEs. |

*TEA Technical Digest for Academic Year 2009-2010

**TEA Technical Digest for Academic Year 2011-2012





What has changed?

Required Credits for Graduation

| | 2010 | 2021 | |
|-----------------------------|-----------|---------------------|--|
| Subject | RHSP | FHSP w/endorsements | Difference |
| English | 4 | 4 | 0 |
| Math | 4 | 4 | 0 |
| Science | 4 | 4 | 0 |
| Social Studies | 4 | 3 | -1 |
| PE | 1.5 | 1 | -0.5 |
| Language Other Than English | 2 | 2 | 0 |
| Fine Arts | 1 | 1 | 0 |
| Speech | 0.5 | 0.5 | 0 |
| Health | 0.5 | 0.5 | 0 |
| Technical Applications | 1 | 0 | -1 |
| Electives | 3.5 | 6 | 2.5 |
| Total | 26 | 26 | 5 more credits available for student choice |

*Source: 2010 and 2021 NBISD Course Catalogs



CTE Programs of Study

Using Labor Market
Information (LMI) 53
Statewide Programs of
Study were developed for
implementation in the
2020-2021 school year.

<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education>





Programs of Study Considerations

- The **course sequences** within each program of study will be used for federal reporting of CTE concentrators
- The new federal definition for a CTE concentrator, as outlined in Perkins V, is the **completion of two courses** (for two or more credits) within a program of study
- CTE completer definition: the **completion of three or more courses for four or more credits** within a program of study including one level three or level four course





Programs of Study Considerations



- Provides students a career path with **opportunities** to continue directly into **postsecondary** and the **workforce**



- Aligns **education** to the **regional economy** building off of the diverse needs of the Texas' economy



- Ability to develop stronger TEKS by utilizing a **gap analysis** between course standards and job skills



- Allows for **flexibility** in alignment of teacher certifications to the course sequencing



- Allows for better **data collection** and reporting of CTE concentrators for districts





NBISD Programs of Study

<https://www.nbisd.org/page/cte.programs>

NBISD Statewide Program of Study
AGRICULTURE, FOOD, AND NATURAL RESOURCES

COURSES
Course availability is determined by prerequisite requirements and may be offered within multiple grade levels.

Principles of Agriculture, Food, and Natural Resources

Small Animal Management
Equine Science

Livestock Production

Advanced Animal Science
Veterinary Medical Applications
Practicum in Agriculture, Food, and Natural Resources

ANIMAL SCIENCE

LEVEL 1

LEVEL 2

LEVEL 3

LEVEL 4

POSTSECONDARY OPTIONS

| HIGH SCHOOL/INDUSTRY CERTIFICATION | CERTIFICATE/LICENSE* | ASSOCIATE'S DEGREE | BACHELOR'S DEGREE | MASTER'S/DOCTORAL PROFESSIONAL DEGREE |
|---|-----------------------|-------------------------------------|------------------------|---------------------------------------|
| Livestock Veterinary Technician | Pet Groomer | Farm Science and Technology | Animal Sciences | Genetics |
| Practical Technician in Cattle Care and Technology (Certified Veterinary Assistant) | Veterinary Technician | Veterinary Studies | Agriculture | Veterinary Medicine |
| | Livestock Breeder | Biotechnology Laboratory Technician | Biotechnology | Biological and Physical Sciences |
| | | Biology Technician | Zoology/Animal Biology | Biotechnology and Biomedical Sciences |

For more information on postsecondary options for this program of study, visit TXCTE.org

Programs of study are course sequences that help prepare students with the knowledge and skills necessary for success in their chosen career. The Animal Science program of study focuses on the science, research, and business of animals and their living organisms. It teaches CTE learners how to apply biology and life science to real-world life processes of animals and wildlife, either in laboratories or in the field, which could include a veterinary office, a farm or ranch, or any outdoor area harboring animal life. Students may also research and analyze the growth and destruction of species and research or diagnose diseases and injuries of animals.

WORK-BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES
Exploration Activities: Texas FFA
Work-Based Learning Activities: Agriculture Science Fair
Internship as a real farm or veterinary office
FFA Supervised Agriculture Experience (SAE)



NBISD Statewide Program of Study
ARTS, AUDIO/VIDEO TECHNOLOGY, AND COMMUNICATIONS

COURSES
Course availability is determined by prerequisite requirements and may be offered within multiple grade levels.

Principles of Arts, Audio/Video Technology, and Communications
Digital Media

Animation I
Commercial Photography I
Graphic Design and Illustration I

Animation II
Commercial Photography II
Graphic Design and Illustration II

Practicum in Animation
Practicum in Commercial Photography
Practicum in Graphic Design and Illustration
Career Preparation I

DESIGN AND MULTIMEDIA ARTS

LEVEL 1

LEVEL 2

LEVEL 3

LEVEL 4

POSTSECONDARY OPTIONS

| HIGH SCHOOL/INDUSTRY CERTIFICATION | CERTIFICATE/LICENSE* | ASSOCIATE'S DEGREE | BACHELOR'S DEGREE | MASTER'S/DOCTORAL PROFESSIONAL DEGREE |
|------------------------------------|---|---|---|---|
| Adobe Photoshop | Certified Digital Designer | Animation, Interactive Technology, and Graphics and Special Effects | Animation, Interactive Technology, and Graphics and Special Effects | Animation, Interactive Technology, and Graphics and Special Effects |
| Adobe Illustrator | Adobe Certified Web Designer Apprenticeship | Graphic Design | Graphic Design | Graphic Design |
| Adobe InDesign | Adobe Suite Certifications | Game and Interactive Media Design | Game and Interactive Media Design | Game and Interactive Media Design |

For more information on postsecondary options for this program of study, visit TXCTE.org

WORK-BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES
Exploration Activities: Join a website development or coding club
Work-Based Learning Activities: Obtain a certificate in graphic design
Internship with a multimedia or animation studio
Obtain a certificate in graphic design

NBISD Statewide Program of Study
MANUFACTURING

COURSES
Course availability is determined by prerequisite requirements and may be offered within multiple grade levels.

Principles of Applied Engineering

Robotics I

Robotics II

Career Preparation I

ADVANCED MANUFACTURING AND MACHINERY MECHANICS

LEVEL 1

LEVEL 2

LEVEL 3

LEVEL 4

POSTSECONDARY OPTIONS

| HIGH SCHOOL/INDUSTRY CERTIFICATION | CERTIFICATE/LICENSE* | ASSOCIATE'S DEGREE | BACHELOR'S DEGREE | MASTER'S/DOCTORAL PROFESSIONAL DEGREE |
|------------------------------------|--------------------------------|---|------------------------|---------------------------------------|
| TBD | Engineer, Professional | Electro-mechanical Engineering/Technology | Electrical Engineering | Electrical Engineering |
| | Certified Quality Technician | Certified Quality Technician | Industrial Engineering | Industrial Engineering |
| | Plant Maintenance Technologist | Industrial Mechanics and Maintenance Technology | Mechanical Engineering | Mechanical Engineering |

OCCUPATIONS MEDIAN WAGE ANNUAL OPENINGS % GROWTH

| OCCUPATIONS | MEDIAN WAGE | ANNUAL OPENINGS | % GROWTH |
|--------------------------------|-------------|-----------------|----------|
| Electro-Mechanical Assemblers | \$30,160 | 951 | 9% |
| Electro-Mechanical Technicians | \$40,555 | 127 | 9% |
| Industrial Machinery Mechanics | \$49,816 | 3,788 | 27% |

Current CTE Programming

- In determining the new HS programming, there will be many programs that can be duplicated and offered at both campuses, especially when they are high-demand and low-cost.
 - Taught in a regular classroom or computer lab
 - May have some sort of initial investment but no long-term costs to run
 - Examples: Accounting, Advanced Animal Science, Law Enforcement, Child Development, Cybersecurity, Medical Terminology, Graphic Design, etc.



Current CTE Programming

- Please know that we likely will not be able to include every program. Some programs may not be conducive to duplication due to the need for an upgraded facility, lack of facility, and location or availability of necessary partnerships
 - Examples:
 - Automotive Technology - cost of new program or a facility upgrade needed
 - Veterinary Medicine - lack of appropriate facility
 - Child Guidance - partnership with early learning facility



Current JROTC Programming



- JROTC cadets (141) make up 5.58% of the total NGC+NBHS student population.
 - 90 male, 51 female
 - 16 seniors, 37 juniors, 32 sophomores, 56 freshman
 - Currently, Freshman are only able to attend 1st/7th



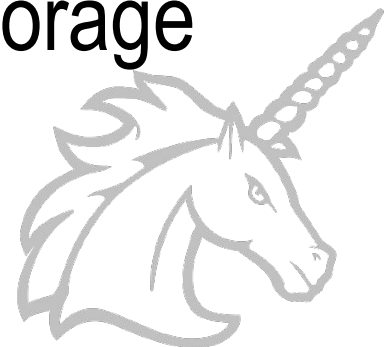
Considerations for JROTC

- JROTC programs have certain instructor, space, and student requirements
- There are a finite number of JROTC programs allowed to be operating in the country
- Districts must submit an application to have a program
- There are also units called National Defense Cadet Corps that are service-specific as well
 - NDCCs are funded by the school district but they all have the same certifications and are normally transformed into a JROTC unit as one opens up



Considerations for JROTC

- Start-up costs
 - desks, drill rifles, flags, marksmanship equipment, etc.
 - instructor salary
 - uniforms, supplies and other operational expenses
- Approximately 5,500 sf that could include:
 - Classroom
 - Large JROTC Drill Instruction/Multipurpose Space
 - Arms, Training Aids, Drill, Uniform and Supply Storage
 - Laundry Room
 - Locker Rooms



Considerations for JROTC

- JROTC programs are good for students, schools and communities.



Duplication of existing programs

- Review handout showing programs that are being considered for duplication at both high school campuses.
 - Highlighted = being considered for duplication
 - Red font = would need upgrade to current facilities
 - Green font = distance to community partners may be a consideration





SBISD



thoughtexchange



What are your thoughts about programs being considered for duplication at both high school campuses?

****When finished, please take a break.****





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Equity



Logistics and Equity

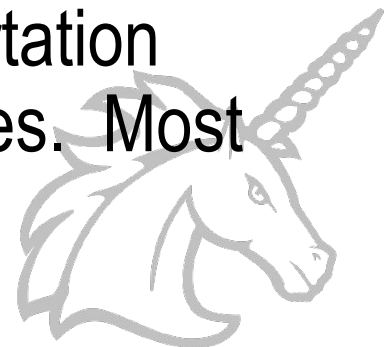
- How do you ensure equity between campuses?
 - Offer all identical programs at both campuses
 - Offer same number of programs at both campuses but programs vary
 - Magnetize programs and offer certain programs at certain campuses





Logistics

- If you magnetize:
 - Students select a home campus (regardless of where they are zoned) in 9th grade based on their desired program of study and stay there all 4 years
 - What if a student changes their mind? Will we allow them to go back to zoned campus?
 - Would not affect UIL eligibility going to a Magnet Program, but may affect it going back to home campus
 - Students go to their zoned home campus and district provides transportation to the other campus based on desired program
 - Distance between campuses and 40 minute transportation time will severely impede schedules at both campuses. Most likely limited to 1st and 7th periods.



Logistics

- Regardless of option selected, there will most likely need to be a plan for upgrading current facilities and equipment at the existing NBHS in the following programs:
 - Ag Mechanics (welding)
 - Automotive
 - Robotics





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thoughtexchange



What should be considered to ensure equity in the area of CTE at both high school campuses?





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CTE Considerations



Considerations for New CTE Programs

Data sources considered:

- Statewide labor market information from the Texas Workforce Commission
- Local labor market information from the Texas Workforce Commission
- Local labor market conversations and survey through the CTE Advisory Committee and other stakeholders
- Student interest survey
- [Census data](#)



Considerations for New CTE Programs

- Review of data up to this point has guided us towards the primary considerations of new* programs that we might consider adding:
 - Construction Technology (and related trades)
 - Culinary Arts
 - Robotics (Competition)* and/or (Advanced Manufacturing)
 - Veterinary Medicine*
- I will present more information about each of these areas, then we will participate in some Q&A and discussion

**Currently have at least one course but facility and program of study will require build-out to offer with fidelity.*



Construction Technology

Statewide Programs of Study exist in:

- Architectural Design/CAD
- Carpentry
- Construction Management Electrical
- HVACR and Sheet Metal
- Plumbing and Pipefitting





Construction Technology - IBC Opportunities

Architecture and Construction

| | | | |
|---|---|---|--|
| Refrigerant Handling (EPA 608) | Autodesk Certified Professional or User in AutoCAD | Autodesk Certified Professional in AutoCAD Civil 3D | Autodesk Certified Professional in Revit Mechanical Building Systems |
| Autodesk Certified Professional or User in Revit Architecture | Autodesk Certified Professional in Revit MEP Electrical | Electrical Apprenticeship Certificate Level 1 | NCCER Sheet Metal, Level 1 |
| NCCER Carpentry, Level 1 | NCCER Carpentry, Level 2 | NCCER Commercial Carpenter | NCCER Commercial Electrician |
| NCCER Construction Site Safety Technician (CSST) | NCCER Construction Technology | NCCER Core Curriculum | NCCER Electrical, Level 1 |
| NCCER Electrical, Level 2 | NCCER Electronic Systems Technician, Level 1 | NCCER Electronic Systems Technician, Level 2 | NCCER HVAC, Level 1 |
| NCCER Masonry, Level 1 | NCCER Masonry, Level 2 | NCCER Painting/Commercial and Residential, Level 1 | NCCER Pipefitting, Level 1 |
| NCCER Plumbing, Level 1 | NCCER Plumbing, Level 2 | NCCER Weatherization, Level 1 | OSHA 30 Hour Construction |
| Tradesman Plumber - Limited License | | Wireless Systems Installer Technician | |





Construction Technology - estimate 9,000 - 12,000 sf

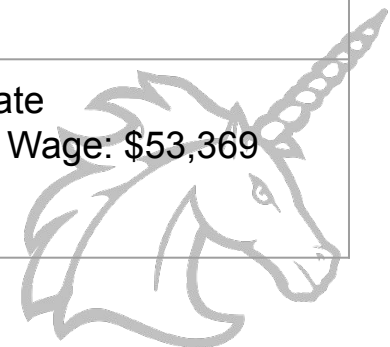
- Estimate 9,000 - 12,000sf that could include:
 - Construction Shops and Labs
 - Architectural Design Studio
 - Storage/Printing/Plotting
 - Materials and Storage
 - Classroom
- Higher initial building construction costs
- Industry partnerships for training and assistance





Construction Technology - Labor Market Occupational Outlook

| Occupational Title | Statewide Workforce LMI | Alamo Workforce LMI | Rural Capital Area Workforce LMI |
|---|---|---|---|
| Architectural and Civil Drafters Required Education: Associate's Degree | 20% Growth Rate Median Annual Wage: \$53,343 | 21% Growth Rate Median Annual Wage: \$53,039 | 24% Growth Rate Median Annual Wage: \$48,193 |
| HVACR Mechanics Required Education: Industry Credential | 23% Growth Rate Median Annual Wage: \$44,552 | 20% Growth Rate Median Annual Wage: \$45,741 | 44% Growth Rate Median Annual Wage: \$43,031 |
| Construction Managers Required Education: Bachelor's Degree | 18% Growth Rate Median Annual Wage: \$90,902 | 19% Growth Rate Median Annual Wage: \$87,591 | 22% Growth Rate Median Annual Wage: \$84,210 |
| Electricians Required Education: Industry Credential | 17% Growth Rate Median Annual Wage: \$49,413 | 16% Growth Rate Median Annual Wage: \$46,418 | 37% Growth Rate Median Annual Wage: \$53,369 |





Culinary Arts

Level 1

Introduction to Culinary Arts
Principles of Hospitality and
Tourism

Level 2

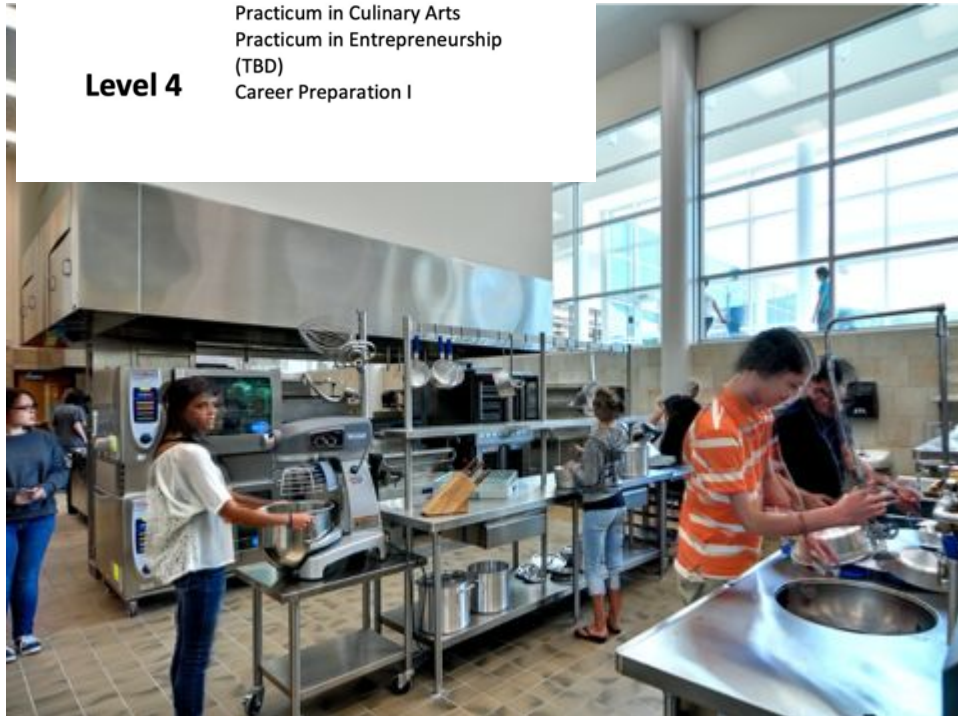
Culinary Arts
Foundations of Restaurant
Management

Level 3

Advanced Culinary Arts

Level 4

Food Science
Practicum in Culinary Arts
Practicum in Entrepreneurship
(TBD)
Career Preparation I





Culinary Arts- IBC Opportunities

Hospitality and Tourism

| | | | |
|--|---|---|------------------|
| Certified Fundamentals Cook (CFC) | Certified Fundamentals Pastry Cook (CFPC) | Certified Hospitality & Tourism Management Professional (AHLEI) | ServSafe Manager |
| ManageFirst Professional® (MFP) Credential | | | |





Culinary Arts - estimate 6,000 - 7,500 sf

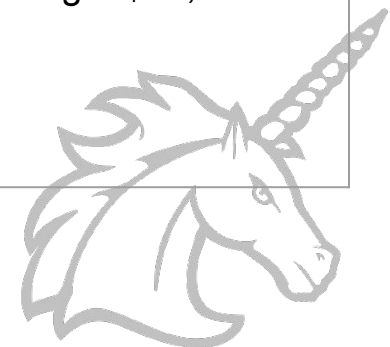
- Estimate 6,000 - 7,500 sf that could include:
 - Production kitchen
 - Future cafe
 - Classroom
- High yearly operational costs for consumables and health code compliance
- Opportunity for portion of program to be self-funded with cafe or catering model





Culinary Arts - Labor Market Occupational Outlook

| Occupational Title | Statewide Workforce LMI | Alamo Workforce LMI | Rural Capital Area Workforce LMI |
|---|---|---|---|
| Chefs and Head Cooks Required Education: Associate's Degree | 22% Growth Rate Median Annual Wage: \$50,580 | 23% Growth Rate Median Annual Wage: \$52,783 | 20% Growth Rate Median Annual Wage: \$57,990 |
| Food Service Managers Required Education: Some college/No degree | 21% Growth Rate Median Annual Wage: \$58,789 | 19% Growth Rate Median Annual Wage: \$55,323 | 22% Growth Rate Median Annual Wage: \$51,269 |
| First-Line Supervisors of Food Prep workers Required Education: High School or equivalent | 25% Growth Rate Median Annual Wage: \$35,341 | 26% Growth Rate Median Annual Wage: \$34,951 | 25% Growth Rate Median Annual Wage: \$37,552 |





Robotics/ Advanced Manufacturing

Level 1

Principles of Manufacturing
Principles of Applied Engineering

Level 2

Engineering Design and
Presentation I
Occupational Safety and
Environmental Technology I
Robotics I
Manufacturing Engineering
Technology I
Programmable Logic Controller I

Level 3

Manufacturing Engineering
Technology II
Robotics II
Occupational Safety and
Environmental Technology II
Programmable Logic Controller II
(TBD)

Level 4

Practicum in Manufacturing
Practicum in Entrepreneurship
(TBD)
Career Preparation I





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Robotics/ Advanced Manufacturing - IBC Opportunities

Manufacturing

| | | | |
|--|--|---|--|
| America Welding Society Certified Welder | API 1104 Welding Certificate | Autodesk Certified Professional or User (ACU)- Inventor | AWS D1.1 Structural Steel |
| AWS D9.1 Sheet Metal | AWS SENSE Welding Level 1 | Certified Electronics Systems Associate | Certified Engineering Technician - Audio Systems |
| Certified SolidWorks Associate (CSWA) | FANUC Robot Operator 1 | ISA Certified Control Systems Technician | ISCET Associate-Level Certified Electronics Technicians (CET) |
| Mastercam Associate Certification - Mill Design and Toolpaths | Mastercam Associate Level Certification | Mastercam Certified Professional Mill Level 1 (CPgM1) | Mastercam Professional Level Certification |
| MSSC (Manufacturing Skills Standards Council) Certified Production Technician (CPT) | NCCER Industrial Maintenance Mechanic, Level 1 | NCCER Instrumentation, Level 1 | NCCER Millwright, Level 1 |
| NCCER Millwright, Level 2 | NCCER Welding, Level 1 | NIMS (National Institute for Metal Working Skills) Industrial Technology Maintenance (ITM) - Basic Mechanical Systems | NIMS (National Institute for Metal Working Skills) Industrial Technology Maintenance (ITM) - Basic Pneumatic Systems |
| NIMS (National Institute for Metal Working Skills) Industrial Technology Maintenance (ITM) - Electrical Systems | NIMS (National Institute for Metal Working Skills) Industrial Technology Maintenance (ITM) - Maintenance Operations | NIMS (National Institute for Metal Working Skills) Industrial Technology Maintenance (ITM) - Electronic Control Systems | NIMS (National Institute for Metal Working Skills) Industrial Technology Maintenance (ITM) - Maintenance Piping |
| NIMS (National Institute for Metal Working Skills) Industrial Technology Maintenance (ITM) - Maintenance Welding | NIMS (National Institute for Metal Working Skills) Industrial Technology Maintenance (ITM) - Process Control Systems | NIMS (National Institute for Metal Working Skills) Machining Level I - CNC Milling: Operations | NIMS (National Institute for Metal Working Skills) Machining Level I - CNC Milling: Programming Setup & Operations |
| NIMS (National Institute for Metal Working Skills) Machining Level I - CNC Turning: Operations | NIMS (National Institute for Metal Working Skills) Machining Level I - CNC Turning: Programming Setup & Operations | NIMS (National Institute for Metal Working Skills) Machining Level I - Drill Press Skills I | NIMS (National Institute for Metal Working Skills) Machining Level I - Grinding Skills I |
| NIMS (National Institute for Metal Working Skills) Machining Level I - Manual Milling Skills I | NIMS (National Institute for Metal Working Skills) Machining Level I - Measurement, Material & Safety | | |





Robotics/Advanced Manufacturing - estimate 5,000 - 7,000 sf

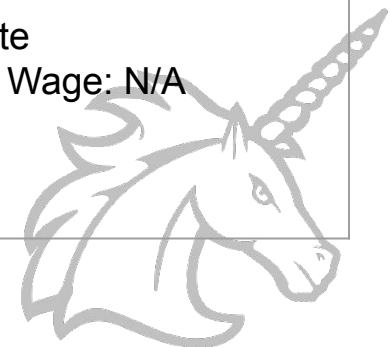
- Estimate 5,000 - 7,000 sf that could include:
 - Classrooms/ Computer Labs
 - Fabrication Lab
 - Supply storage
 - Demo space
- Most requested program from industry partners
 - Opportunity for training and equipment





Robotics/Advanced Manufacturing Labor Market Occupational Outlook

| Occupational Title | Statewide Workforce LMI | Alamo Workforce LMI | Rural Capital Area Workforce LMI |
|---|---|---|---|
| Industrial Machinery Mechanics Required Education: Industry Credential | 18% Growth Rate Median Annual Wage: \$53,547 | 18% Growth Rate Median Annual Wage: \$50,430 | 27% Growth Rate Median Annual Wage: \$47,013 |
| Computer Numerically Controlled Machine Tool Programmers Required Education: Associate's Degree | 34% Growth Rate Median Annual Wage: \$54,511 | N/A Growth Rate Median Annual Wage: N/A | 40% Growth Rate Median Annual Wage: \$54,172 |
| Electric Motor and Related Repair Required Education: Industry Credential | 18% Growth Rate Median Annual Wage: \$38,607 | 16% Growth Rate Median Annual Wage: \$41,215 | N/A Growth Rate Median Annual Wage: N/A |





Veterinary Medicine

Level 1

Principles of Agriculture, Food, and
Natural Resources

Small Animal Management
Equine Science

Level 2

Livestock Production/Lab

Level 3

Advanced Animal Science
Veterinary Medical
Applications/Lab
Practicum in Agriculture, Food, and
Natural Resources
Project-Based Research
Scientific Research and Design

Level 4





Veterinary Medicine

Agriculture, Food, and Natural Resources

| | | | |
|---|--|--|--|
| 1 Landscape Irrigation Technician License | Licensed Veterinary Technician | OSHA 30 Hour General Industry | OSHA Hazardous Waste Operations and Emergency Response |
| Commercial/Noncommercial Pesticide Applicator | Feedyard Technician in Cattle Care and Handling | Feedyard Technician in Machinery Operation, Repair and Maintenance | Texas State Floral Association Floral Skills Knowledge Based Certification |
| Texas State Floral Association Level One Floral Certification | Texas State Floral Association Level Two Certification | Certified Veterinarian Assistant, Level 1 | Wastewater Collections, Class 1 |
| Water Operators, Class D | | | |





Veterinary Medicine- estimate 2,500 - 3,000 sf

- Estimate 2,500 - 3,000 sf that could include:
 - Classroom
 - Small Animal Lab
 - Grooming/Washing Area
 - Lobby/Reception Area
 - Tool Room/Storage
- Industry partners for required student hours





Veterinary Medicine

Labor Market Occupational Outlook

| Occupational Title | Statewide Workforce LMI | Alamo Workforce LMI | Rural Capital Area Workforce LMI |
|--|---|---|---|
| Veterinarian Required Education: Doctoral or professional degree | 25% Growth Rate Median Annual Wage: \$99,034 | 27% Growth Rate Median Annual Wage: \$92,396 | 29% Growth Rate Median Annual Wage: redacted |



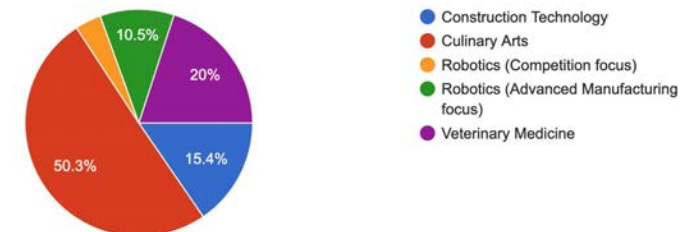


Considerations for New CTE Programs

| | Texas Statewide LMI | Alamo LMI | Rural Capital Area LMI | CTE Stakeholder Input | Student Interest 590 responses |
|----------------------------------|---------------------|-----------|------------------------|-----------------------|-----------------------------------|
| Construction Related Trades | ✓ | ✓ | ✓ | ✓ | 15.4% |
| Culinary Arts | ✓ | ✓ | ✓ | ✗ | 50.3% |
| Robotics /Advanced Manufacturing | ✓ | ✓ | ✓ | ✓ | 14.3% |
| Veterinary Medicine | ✓ | ✓ | ✗ | ✗ | 20% |

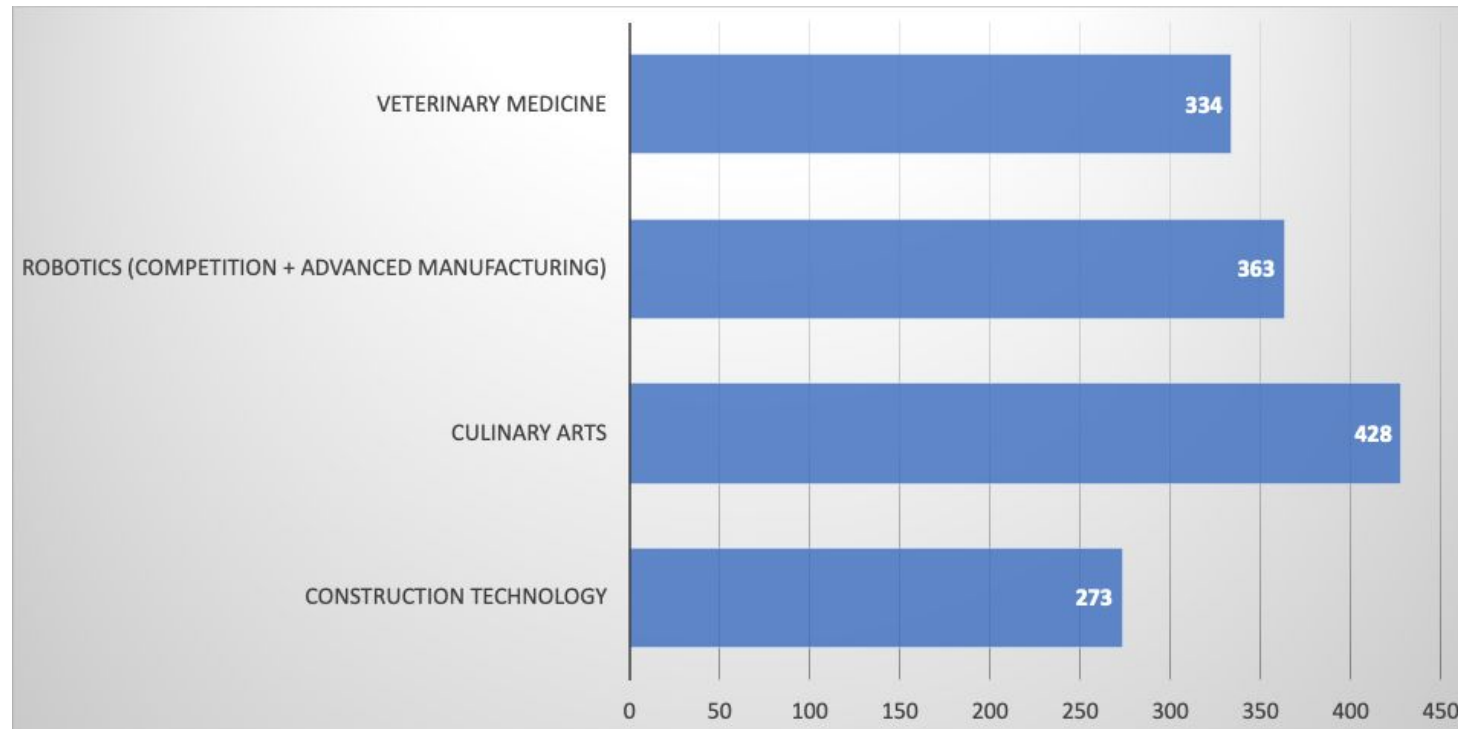
If you were going to recommend that we fully build and equip ONE of these programs to serve NBISD students, which would it be?

590 responses



Considerations for New CTE Programs

Question: The following are possible program areas for consideration. If these would have been available as options for you, please indicate which you would have been interested in.



Impact of adding any of these programs

Cost of
program/specialty
space required - the
higher or more specific
the square footage, the
more expensive it will be

Long term
sustainability

Staffing

Response to equity

Adding new
programs
takes away
from other
programs





Q&A

What questions do you have for the good of the group that will help you before you break into discussion groups?

Your discussion results will be shared in a final ThoughtExchange as your Exit Ticket.





Discussion Protocol

Pose the Problem: Calling for a bond that includes adding all programs is neither equitable nor financially feasible. We need to narrow down what programs we want to add. Programs we are considering right now are:

- a. Construction
- b. Culinary Arts
- c. Robotics
- d. Veterinary Medicine





Discussion Protocol

1. **Individual response:** before sharing any thoughts with your group, write your thoughts from your own point of view. Once everyone has written something down, go to step 2.
2. **Share:** Each person share your response and a very brief explanation.
3. **Discussion:** engage in questioning other group members. Each group member should have a chance to respond to a question.





Possible probing question stems:

- What would have to change in order for...?
- What sort of an impact do you think...?
- How did you decide/determine/conclude...?
- What is your hunch about...?
- How might your assumptions about...have influenced how you're thinking about...?
- What surprises you about...? Why are you surprised?
- What is the best thing that could happen?
- What are you most afraid will happen?
- What do you need to ask to better understand?
- If you were a student, how would you see this situation?





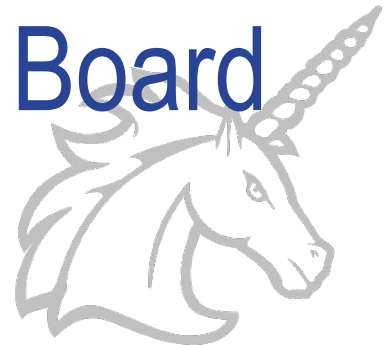
SBISD



thoughtexchange



When thinking about adding programs, which one do you think would add the most value for the most stakeholders? What would you recommend to the Board of Trustees?





thoughtexchange



Do you have any suggestions for the overall bond planning process?





- ✓ *We will review information related to programming and collaboratively gather feedback to determine recommendations to be included in the presentation to the NBISD Board of Trustees.*
- ✓ *I will actively participate in discussions and decision making related to specialized programming at the new high school.*

Thank you!

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