CTE | NE

NORTH EAST INDEPENDENT SCHOOL DISTRICT

PROGRAMS OF STUDY

COMPREHENSIVE HIGH SCHOOLS

We will build the future by aligning our teaching to industry needs so that our students are prepared to answer the call of the demands of our community's economy and workforce.

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Architecture and Construction Career Cluster

The Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management.

Architectural Drafting and Design

The Architectural Drafting and Design program of study explores the occupations and educational opportunities associated with developing, engineering, and designing building structures and facilities. This program of study may also include exploration into collecting and interpreting geographic information, researching and preparing maps, and interior design.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	H6647	Principles of Architecture	1.0
Level 2	H8245	Architectural Design I **(Prerequisite: Prin. Of Architecture)**	1.0
	H6660	Computer Aided Drafting for Architecture **(Prerequisite: Prin. Of Architecture)**	1.0
Level 3	H8246	Architectural Design II **(Prerequisite: Architectural Design I)** *Autodesk Associate User IBC*	2.0
Level 4	H8247	Practicum in Architectural Design **(Prerequisite: Architectural Design II)**	2.0
	H8289	CTE Project-Based Capstone **(Prerequisite: Three Courses in a CTE Pathway)**	1.0
	H6745	Career Preparation I (10 hrs. work week)	2.0
	H8310	Ext. Career Preparation I (15 hrs. work week)	3.0

Successful completion of 4 or more course credits in the Architectural Drafting and Design program of study will fulfill requirements for a Business and Industry Endorsement.

Work-Based and Expanded Learning Opportunities

- Shadow an architect, interior designer or civil engineer
- Participate in SkillsUSA/TSA
- Intern at an architectural firm
- ACE Mentorship Program
- AIAS Membership

Postsecondary Opportunities

Associates Degrees
- Architecture
- Interior Design
- Civil Engineering, General
- Geographic Information Science and Cartography

Bachelor's Degrees
- Architecture
- Interior Design
- Civil Engineering, General
- Geographic Information Science and Cartography

Master's, Doctoral, and Professional Degrees
- Architecture
- Interior Architecture
- Civil Engineering, General
- Geographic Information Science and Cartography

NON-MAGNET CAMPUSES OFFERING PROGRAM

LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓			✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Architects	$77,043	808	16%
Geographic Information Analysts and Surveyors	$58,926	162	27%
Architectural/ Civil Drafters	$50,170	1,068	9%
Construction Managers	$87,402	2,401	14%

NEISD does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups.

Arts, Audio/Video Technology, and Communications Career Cluster

The Arts, A/V Technology and Communications (AAVTC) Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services. Careers in the AAVTC career cluster require a creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication.

Digital Communications

The Digital Communications program of study explores the occupations and educational opportunities associated with the production of audio and visual media formats for various purposes, such as TV broadcasts, advertising, video production, or motion pictures. This program of study may also include exploration into operating machines and equipment to record sound and images, such as microphones, sound speakers, video screens, projectors, video monitors, sound and mixing boards, and related electronic equipment.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3000	Digital Communications in 21st Century*	1.0
	M3020	Principles of Arts, A/V, & Comm.* ** Course may be taken in middle school.*	1.0
	H6656	Principles of Arts, A/V, & Comm.	1.0
Level 2	H6731	Audio/Video Production I **(Prerequisite: Prin. Of A/V)**	1.0
	H8308	Entrepreneurship I **(Prerequisite: Prin. Of BMF)** *Entrepreneurship & Small Business IBC*	1.0
Level 3	H6741	Audio/Video Production II **(Prerequisite: A/V Prod. I)** *Adobe Certified Professional IBC*	1.0
	H6742	Audio/Video Production II with lab **(Prerequisite: A/V Prod. I) (Corequisite: A/V Prod II. A/V Prod II Lab must be taken concurrently with A/V Prod II & may not be taken as a stand-alone course.)** *Adobe Certified Professional IBC*	2.0
Level 4	H6761	Practicum in Audio/Video Production **(Prerequisite: AV Prod II & AV Prod II lab)**	2.0
	H6745	Career Preparation I (10 hrs. work week)	2.0
	H8310	Ext. Career Preparation I (15 hrs. work week)	3.0

Successful completion of 4 or more course credits in the Digital Communications program of study will fulfill requirements of the Business and Industry endorsement.

Work-Based and Expanded Learning Opportunities

- Shadow a production team
- Participate in SkillsUSA or TSA
- Intern at a local television station or video production company
- Work with a local company on a project

Postsecondary Opportunities

Associates Degrees
- Recording Arts Technology/Technician
- Cinematography and Film/Video Production
- Radio and Television Broadcasting Technology/Technician
- Music Technology

Bachelor's Degrees
- Recording Arts Technology/Technician
- Cinematography and Film/Video Production
- Radio and Television
- Agricultural Communication/Journalism

Master's, Doctoral, and Professional Degrees
- Communications Technology/Technician
- Cinematography and Film/Video Production
- Radio and Television
- Agricultural Communication/Journalism

NON-MAGNET CAMPUSES OFFERING PROGRAM						
LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓		✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Sound Engineering Technicians	$39,562	79	27%
Camera Operators, Television, Video, and Motion Picture	$50,024	129	9%
Audio and Video Equipment Technicians	$40,581	757	29%
Film and Video Editors	$47,382	118	23%

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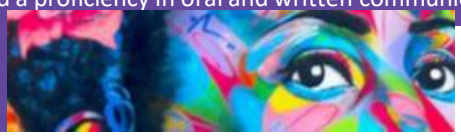
Arts, Audio/Video Technology, and Communications Career Cluster

The Arts, A/V Technology and Communications (AAVTC) Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services. Careers in the AAVTC career cluster require a creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication.

Graphic Design and Interactive Media



The Graphic Design and Interactive Media program of study explores the occupations and educational opportunities associated with designing or creating graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. This program of study may also include exploration into designing clothing and accessories, and creating special effects, animation, or other visual images using film, video, computers, or other electronic tools and media, for use in computer games, movies, music videos, and commercials.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3020	Principles of Arts, A/V, & Comm.*	1.0
	H6656	Principles of Arts, A/V, & Comm	1.0
	H6700	Video Game Design	1.0
Level 2	H6711	Animation I (Prerequisite: Prin. of A/V)	1.0
	H6732	Commercial Photography I (Prerequisite: Prin. of A/V)	1.0
	H8015	Fashion Design I (Prerequisite: Prin. of A/V)	1.0
	H3024	Digital Design and Media Production (Prerequisite: Prin. of A/V)	1.0
	H8308	Entrepreneurship I (Prerequisite: Prin. Of BMF) *Entrepreneurship & Small Business IBC*	1.0
Level 3	H6713	Animation II (Prerequisite: Animation I) *Adobe Certified Professional IBC*	1.0
	H6714	Animation II with lab (Prerequisite: Animation I, Animation II Lab must be taken concurrently with Animation II) *Adobe Certified Professional IBC*	2.0
	H6735	Commercial Photography II (Prerequisite: Commercial Photography I) *Adobe Certified Professional IBC*	1.0
	H6747	Fashion Design II (Prerequisite: Fashion Design I)	1.0
	H6749	Fashion Design II with lab (Prerequisite: Fashion Design I, Fashion Design II Lab must be taken concurrently with Fashion Design II)	2.0
Level 4	H6760	Practicum in Animation (Prerequisite: Animation II & Animation II Lab)	2.0
	H6745	Career Preparation I (10 hrs. work week)	2.0
	H8310	Ext. Career Preparation I (15 hrs. work week)	3.0

Work-Based and Expanded Learning Opportunities

- Join a website development or coding club
- Participate in SkillsUSA or TSA
- Participate in Family, Community, & Careers Leaders of America
- Intern with a multimedia or animation studio
- Obtain a certificate or certification in graphic design

Postsecondary Opportunities

Associates Degrees
- Animation, Interactive Technology, Video Graphics and Special Effects
- Graphic Design
- Game and Interactive Media Design

Bachelor's Degrees
- Animation, Interactive Technology, Video Graphics and Special Effects
- Graphic Design
- Game and Interactive Media Design

Master's, Doctoral, and Professional Degrees
- Animation, Interactive Technology, Video Graphics and Special Effects
- Graphic Design
- Intermedia/Multimedia

NON-MAGNET CAMPUSES OFFERING PROGRAM

LEE	MAC	TR	WC	JM	RR	CTJ
	✓	✓	✓	✓	✓	✓

Successful completion of 4 or more course credits in the Graphic Design and Interactive Media program of study will fulfill requirements of the Business and Industry endorsement.

** Course may be taken in middle school.*

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Graphic Designers	$44,824	1,433	15%
Multimedia Artists and Animators	$67,392	186	21%

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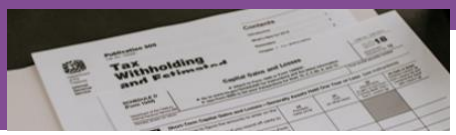
Business, Marketing, and Finance Career Cluster

The Business, Marketing, and Finance Career Cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations.

Accounting and Financial Services



The Accounting and Financial Services program of study teaches CTE learners how to examine, analyze, and interpret financial records. Through this program of study, students will learn the skills necessary to perform financial services, prepare financial statements, interpret accounting records, give advice, or audit and evaluate statements prepared by others. This program of study will also introduce students to mathematical modeling tools.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3033	Principles of Business, Mktg., & Finance* ** Course may be taken in middle school.*	1.0
	H8290	Principles of Business, Mktg., & Finance	1.0
	H8291	Business Info. Management I	1.0
Level 2	H8301	Accounting I **(Prerequisite: Prin. of BMF)**	1.0
	H8300	Banking & Financial Services **(Prerequisite: Prin. of BMF)**	1.0
	H8272	Financial Math (Math Cr.) **(Prerequisite: Prin. of BMF)**	1.0
	H8308	Entrepreneurship I **(Prerequisite: Prin. Of BMF)** *Entrepreneurship & Small Business IBC*	1.0
Level 3	H8302	Accounting II **(Prerequisite: Accounting I)** *Intuit Quickbooks Certified User IBC* *Volunteer Income Tax Assistance/Tax Counseling IBC* (Math Cr.)	1.0
Level 4	H8312	Practicum in Entrepreneurship **(Prerequisite: Successful Competition of two courses in this pathway)**	2.0
	H6745	Career Preparation I (10 hrs. work week)	2.0
	H8310	Ext. Career Prep. I (15 hrs. work week)	3.0

Successful completion of 4 or more course credits in the Accounting and Financial Services program of study will fulfill requirements of the Business and Industry endorsement.

Work-Based and Expanded Learning Opportunities

- Participate in Future Business Leaders of America, or DECA
- Intern with a local accounting firm
- Earn Microsoft Office certifications

Postsecondary Opportunities

Associates Degrees
- Real Estate
- Financial, General
- Financial Planning and Services
- Certified Income Specialist

Bachelor's Degrees
- Accounting
- Financial, General
- Financial Planning and Services
- Certified Income Specialist

Master's, Doctoral, and Professional Degrees
- Financial Accounting
- Business Administration
- Financial Planning

NON-MAGNET CAMPUSES OFFERING PROGRAM

LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓		✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Accountants and Auditors	$71,469	14,436	22%
Loan Officers	$68,598	2,419	19%
Personal Financial Advisors	$86,965	1,861	52%
Administrative service Managers	$96,138	2,277	21%
Insurance Underwriters	$66,206	594	14%

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Business, Marketing, and Finance Career Cluster

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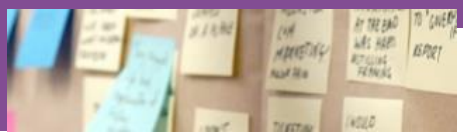
Business Management



The Business Management program of study teaches CTE learners how to plan, direct, and coordinate the administrative services and operations of an organization. Through this program of study, students will learn the skills necessary to formulate policies, manage daily operations, and allocate the use of materials and human resources. This program of study will also introduce students to mathematical modeling tools and organizational evaluation methods.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3033	Principles of Business, Mktg., & Finance* ** Course may be taken in middle school.*	1.0
	H8290	Principles of Business, Mktg., & Finance	1.0
	H8291	Business Info. Management I	1.0
Level 2	H8292	Business Info. Management II **(Prerequisite: Prin. of BMF)** *Microsoft Office Expert Excel, Word IBC*	1.0
	H8288	Virtual Business **(Prerequisite: Prin. of BMF)**	0.5
	H8308	Entrepreneurship I **(Prerequisite: Prin. Of BMF)** *Entrepreneurship & Small Business IBC*	1.0
Level 3	H8296	Global Business **(Prerequisite: Prin. of BMF)**	0.5
	H8294	Business Management **(Prerequisite: BIM I)** *Entrepreneurship & Small Business IBC*	1.0
Level 4	H8312	Practicum in Entrepreneurship **(Prerequisite: Entrepreneurship I & II)**	2.0
	H6745	Career Preparation I (10 hrs. work week)	2.0
	H8310	Ext. Career Prep. I (15 hrs. work week)	3.0

Successful completion of 4 or more course credits in the Business Management program of study will fulfill requirements of the Business and Industry endorsement.

Work-Based and Expanded Learning Opportunities

- Participate in Future Business Leaders of America, or DECA
- Intern with a local business or chamber of commerce

Postsecondary Opportunities

Associates Degrees
- Business Administration
- Business/Commerce
- Public Administration
- Business Management

Bachelor's Degrees
- Business Administration
- Business/Commerce
- Public Administration
- Management Science

Master's, Doctoral, and Professional Degrees
- Business Administration
- Business Management
- Public Administration
- Management Science

NON-MAGNET CAMPUSES OFFERING PROGRAM						
LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Administrative Service Managers	$96,138	2,277	21%
Management Analysts	$87,651	4,706	32%
General and Operations Managers	$107,640	18,679	20%
Supervisors of Administrative Support Works	$57,616	14,982	20%

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Business, Marketing, and Finance Career Cluster

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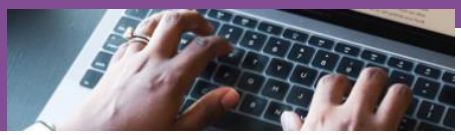
Entrepreneurship



The Entrepreneurship program of study teaches CTE learners how to plan, direct, and coordinate the management and operations of public or private sector organizations. Through this program of study, students will learn the skills necessary to formulate policies, manage daily operations, analyze management structures, and plan for the use of materials and human resources.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3033	Principles of Business, Mktg., & Finance* ** Course may be taken in middle school.*	1.0
	H8290	Principles of Business, Mktg., & Finance	1.0
	H8291	Business Info. Management I	1.0
Level 2	H8308	Entrepreneurship I **(Prerequisite: Prin. of BMF)** *Entrepreneurship & Small Business IBC*	1.0
Level 3	H8314	Entrepreneurship II **(Prerequisite: Entrepreneurship I)**	1.0
Level 4	H8312	Practicum in Entrepreneurship **(Prerequisite: Entrepreneurship I & II)**	2.0
	H8309	Practicum in Marketing *Facebook Digital Marketing Assoc. IBC*	2.0
	H8289	CTE Project-Based Capstone **(Prerequisite: Three Courses in a CTE Pathway)**	1.0
	H6745	Career Preparation I (10 hrs. work week)	2.0
	H8310	Ext. Career Prep. I (15 hrs. work week)	3.0

Successful completion of 4 or more course credits in the Entrepreneurship program of study will fulfill requirements of the Business and Industry endorsement.

Work-Based and Expanded Learning Opportunities

- Participate in Future Leaders of America, or DECA
- Intern with a local management consulting firm

Postsecondary Opportunities

Associates Degrees
- Business Administration and Management
- Business/Commerce
- Public Administration
- Business Management

Bachelor's Degrees
- Business Administration and Management
- Business/Commerce
- Public Administration
- Management Science

Master's, Doctoral, and Professional Degrees
- Business Administration and Management
- Business/Commerce
- Public Administration
- Management Science

NON-MAGNET CAMPUSES OFFERING PROGRAM

LEE	MAC	TR	WC	JM	RR	CTJ
			✓		✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
General and Operations Managers	$107,640	18,679	20%
Management Analysts	$87,651	4,706	32%
Managers, All Others	$113,110	1,794	26%

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Business, Marketing, and Finance Career Cluster

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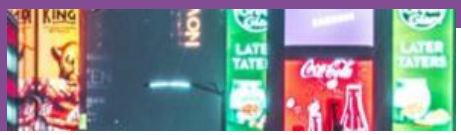
Marketing and Sales



The Marketing and Sales program of study teaches CTE learners how to collect information to determine potential sales of a product or service and/or create a marketing campaign to market or distribute goods and services. Through this program of study, students will learn the skills necessary to understand and apply data on customer demographics, preferences, needs, and buying habits.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3033	Principles of Business, Mktg., & Finance* ** Course may be taken in middle school.*	1.0
	H8290	Principles of Business, Mktg., & Finance	1.0
Level 2	H8014	Fashion Marketing **(Prerequisite: Prin. of BMF)**	0.5
	H8304	Sports & Entertainment Marketing I **(Prerequisite: Prin. of BMF)**	0.5
	H8288	Virtual Business **(Prerequisite: Prin. of BMF)**	0.5
	H8308	Entrepreneurship I **(Prerequisite: Prin. of BMF)** *Entrepreneurship & Small Business IBC*	1.0
	H8700	Fundamentals of Real Estate **(Prerequisite: Prin. of BMF & ONE full year credit of a Level 2 or Level 3 Course in the Marketing & Sales Pathway)**	2.0
Level 3	H6769	Social Media Marketing **(Prerequisite: Prin. of BMF)** *Stukent Social Media Marketing IBC*	0.5
	H8306	Advertising **(Prerequisite: Prin. of BMF)**	0.5
	H8313	Sports & Entertainment Marketing II **(Prerequisite: Sports & Entertainment Marketing I)**	0.5
Level 4	H8312	Practicum in Entrepreneurship **(Prerequisite: Completion of at least two courses in a CTE program of study.)**	2.0
	H8309	Practicum in Marketing *Facebook Digital Marketing Assoc. IBC*	2.0
	H6745	Career Preparation I (10 hrs. work week)	2.0
	H8310	Ext. Career Prep. I (15 hrs. work week)	3.0

Work-Based and Expanded Learning Opportunities

- Participate in Future Business Leaders of America, or DECA
- Intern with a local marketing firm
- Shadow a real estate agent
- Operate a school store on campus

Postsecondary Opportunities

Associates Degrees
- Marketing/ Marketing Management, General
- Consumer Merchandising/ Retailing Management
- International Marketing
- Business

Bachelor's Degrees
- Marketing/ Marketing Management, General
- Business Administration
- Applied Economics
- Marketing Research

Master's, Doctoral, and Professional Degrees
- Marketing
- Business Administration
- Applied Economics
- Advertising

CAMPUSES OFFERING PROGRAM OF STUDY

LEE	MAC	TR	WC	JM	RR	CTJ
	✓		✓	✓	✓	✓

Successful completion of 4 or more course credits in the Marketing and Sales program of study will fulfill requirements of the Business and Industry endorsement.

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Marketing Research Analysts and Marketing Specialists	$70,346	4,664	40%
Insurance Sales Agent	$43,181	5,886	30%
First-Line Supervisors of Retail Sales Workers	$72,550	2,826	15%
Wholesale and Retail Buyers	$51,106	1,229	19%

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Business, Marketing, and Finance Career Cluster

The Business, Marketing, and Finance Career Cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations.

Real Estate

The Real Estate program of study focuses on occupational and educational opportunities associated with financing, selling, and contracting real estate. This program of study includes management, economics, marketing, and financial principles of real estate evaluation. It also addresses commercial real estate including lending, developing, brokering, and financing.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3033	Principles of Business, Mktg., & Finance* ** Course may be taken in middle school.*	1.0
	H8290	Principles of Business, Mktg., & Finance	1.0
Level 2	H8014	Interior Design I **(Prerequisite: Principles of Architecture)**	1.0
	H8304	Entrepreneurship I **(Prerequisite: Prin. of BMF)** *Entrepreneurship & Small Business IBC*	1.0
	H8288	Financial Mathematics **(Prerequisite: Prin. of BMF)**	1.0
Level 3	H8700	Fundamentals of Real Estate **(Prerequisite: Prin. of BMF & any Level 2 Course in the Real Estate Pathway)** *Stukent Social Media Marketing IBC*	2.0
Level 4	H8312	Practicum in Entrepreneurship **(Prerequisite: Entrepreneurship I & II)**	2.0
	H6745	Career Preparation I (10 hrs. work week)	2.0
	H8310	Ext. Career Prep. I (15 hrs. work week)	3.0

Successful completion of 4 or more course credits in the Real Estate program of study will fulfill requirements of the Business and Industry endorsement.

Work-Based and Expanded Learning Opportunities

- Participate in Future Business Leaders of America, or DECA
- Intern with a local marketing firm
- Shadow a real estate agent
- Operate a school store on campus

Postsecondary Opportunities

Associates Degrees
- Business Administration and Management
- Real Estate

Bachelor's Degrees
- Business Administration and Management
- Real Estate

Master's, Doctoral, and Professional Degrees
- Business Administration and Management
- Parks, Recreation, and Leisure Facilities Management

Additional Stackable IBCs/License
- Real Estate Broker

NON-MAGNET CAMPUSES OFFERING PROGRAM						
LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Real Estate Sales Agent	$50,746	5,058	15%
Property, Real Estate, and Community Association Managers	$59,788	3,457	15%
Title Examiners, Abstractors, and Searchers	$58,593	819	12%

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Education and Training Career Cluster

The Education and Training Career Cluster focuses on planning, managing, and providing education and training services and related learning support services. All parts of courses are designed to introduce learners to the various careers available within the Education and Training career cluster.

Early Learning

The Early Learning program of study focuses on early childhood education, which consists of instructing and supporting preschool and early elementary school students in activities that promote social, physical and intellectual growth as well as in basic elements of science, art, music, and literature. This program of study introduces CTE learners to tasks necessary for planning, directing, and coordinating activities for young children.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3045 M3016	Principles of Education & Training* Principles of Human Services* ** Course may be taken in middle school.*	1.0 1.0
	H8041	Principles of Education & Training	1.0
	H6721	Principles of Human Services	1.0
Level 2	H6764	Child Development **(Prerequisite: Prin. of Human Serv. Or Educ. & Training)** *Pre-Professional Certification in Early Childhood Education IBC*	1.0
Level 3	H6765	Child Guidance **(Prerequisite: Child Development)** *Early Childhood Education & Care – Basic IBC*	2.0
Level 4	H8046	Practicum in Early Learning **(Prerequisite: Child Guidance)**	2.0
	H8289	CTE Project-Based Capstone **(Prerequisite: Three Courses in a CTE Pathway)**	1.0
	H6745 H8310	Career Preparation I (10 hrs. work week) Ext. Career Prep. I (15 hrs. work week)	2.0 3.0

Successful completion of 4 or more course credits in the Early Learning program of study will fulfill requirements of the Public Service endorsement.

Work-Based and Expanded Learning Opportunities

- Participate in the Texas Association of Future Educators or Family, Career, and Community Leaders of America
- Teach a community education class
- Volunteer as a teaching assistant

Postsecondary Opportunities

Associates Degrees
- Early Childhood Education and Teaching
- Multicultural Early Childhood Development
- Kindergarten/Preschool Education and Training
- Psychology/Sociology

Bachelor's Degrees
- Early Childhood Education and Teaching
- Multicultural Early Childhood Development
- Early Childhood
- Psychology/Sociology

Master's, Doctoral, and Professional Degrees
- Early Childhood Education and Teaching
- Multicultural Early Childhood Development
- Educational, Instructional, and Curriculum Supervision
- Educational Leadership and Administration

CAMPUSES OFFERING PROGRAM OF STUDY

LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Kindergarten Teachers, except Special Education	$53,310	1,848	17%
Preschool Teachers	$27,851	4,330	17%
Elementary School Teachers	$54,140	13,121	16%
Education Administrators, Elementary and Secondary School	$79,830	2407	16%

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Education and Training Career Cluster

The Education and Training Career Cluster focuses on planning, managing, and providing education and training services and related learning support services. All parts of courses are designed to introduce learners to the various careers available within the Education and Training career cluster.

Teaching and Training

The Teaching and Training program of study prepares CTE learners for careers related to teaching, instruction, and creation of instructional and enrichment materials. The program of study introduces CTE learners to a wide variety of student groups and their corresponding needs. It familiarizes them with the processes for developing curriculum, coordinating educational content, and coaching groups and individuals.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3045 M3016	Principles of Education & Training* Principles of Human Services* ** Course may be taken in middle school.*	1.0 1.0
	H8041	Principles of Education & Training	1.0
	H6721	Principles of Human Services	1.0
Level 2	H6764	Child Development **(Prerequisite: Prin. of Human Serv. Or Educ. & Training)** *Pre-Professional Certification in Early Childhood Education IBC*	1.0
	H6754	Human Growth & Development **(Prerequisite: Prin. of Human Serv. Or Educ. & Training)**	1.0
Level 3	H8084	Ready, Set, Teach I **(Prerequisite: Prin. of Human Serv. Or Educ. & Training)** *Educational Aide I IBC*	2.0
Level 4	H8043	Ready, Set, Teach II **(Prerequisite: Ready, Set, Teach I)** *Educational Aide I IBC*	2.0
	H8289	CTE Project-Based Capstone **(Prerequisite: Three Courses in a CTE Pathway)**	1.0
	H6745 H8310	Career Preparation I (10 hrs. work week) Ext. Career Prep. I (15 hrs. work week)	2.0 3.0

Successful completion of 4 or more course credits in the Teaching & Training program of study will fulfill requirements of the Public Service endorsement.

Work-Based and Expanded Learning Opportunities

- Participate in the Texas Association of Future Educators or Family, Career, and Community Leaders of America
- Teach a community education class
- Intern as a teaching assistant or tutor
- Serve as a camp counselor

Postsecondary Opportunities

Associates Degrees
- Teacher Education
- Education, General (or specific subject area)
- Special Education
- Health and Physical Education/Fitness

Bachelor's Degrees
- Bilingual and Multilingual Education
- Education, General (or specific subject area)
- Special Education
- Health and Physical Education/Fitness

Master's, Doctoral, and Professional Degrees
- Instruction and Learning
- Educational Leadership and Administration, General
- Special Education
- Social and Philosophical Foundations of Education

CAMPUSES OFFERING PROGRAM OF STUDY

LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Adult Basic and Secondary Education and Literacy Teachers and Instructors	$48,069	862	17%
Middle School Teachers, Except Special and Career/Technical Education	$54,510	6,407	15%
Career and Technical Education Teachers, Secondary School	$56,360	719	9%
Special Education Teachers, Secondary School	$56,720	980	18%

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Health Science Career Cluster

The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, communicate effectively, and work well with others.

Nursing Science

The Nursing Science program of study introduces students to the knowledge and skills related to patient care. CTE learners may learn about or practice caring for patients, routine procedures such as monitoring vital signs, development and implementation of care plans, maintenance of medical records, and disease or pain management. Students may focus on the healthcare system and research system designs and make recommended modifications.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	H8340	Principles of Health Science	1.0
Level 2	H6757	Medical Terminology **(Prerequisites: Prin. of Health Science)**	1.0
Level 3	H3253	Anatomy & Physiology (Science cr.) **(Prerequisites: one credit in Biology, Chemistry, IPC, or Physics.)**	1.0
	H8344	Health Science Theory **(Prerequisites: Biology, & at least one credit in a course from the Health Sci. career cluster.)**	1.0
	H8346	Health Science Clinicals **(Prerequisites: Principles of Health Science, Medical Terminology, Biology, and Health Science Theory.)** *Phlebotomy Technician IBC*	2.0
	H6758	Medical Microbiology (Science cr.) **(Prerequisites: Biology, Chemistry & at least one credit in a Level 2 or higher course from the Health Sci. career cluster.)**	1.0
Level 4	H8348	Certified Nurse Aide (CTEC) (Prerequisites: Principles of Health Science, Medical Terminology, Biology, and Health Science Theory.) *Certified Nurse Aide IBC*	2.0
	H6759	Pathophysiology (Science cr.) **(Prerequisites: Biology and Chemistry; & 1 credit in a Level 2 or higher course from the Health Sci. career cluster)**	1.0

Successful completion of 4 or more course credits in the Nursing Science program of study will fulfill requirements of the Public Service endorsement.

Work-Based and Expanded Learning Opportunities

- Participate in SkillsUSA or Health Occupation Students of America
- Volunteer at a community wellness center, hospital, assisted living, or nursing home

Postsecondary Opportunities

Associates Degrees

- Registered Nursing/Registered Nurse

Bachelor's Degrees

- Registered Nursing/Registered Nurse

Master's, Doctoral, and Professional Degrees

- Nurse Practitioner
- Nursing Administration
- Nurse Anesthetist
- Nurse Midwife
- Doctor of Nursing

Program offered at the Career and Technical Education Center (CTEC) and is available to students from any NEISD high school. Students must apply through the magnet application process prior to entry. All courses offered at CTEC require two periods within a student schedule.

CAMPUSES OFFERING PROGRAM						
LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Medical Assistants	$29,598	8,862	30%
Surgical Technologists	$45,032	1,150	20%
Dental Hygienists	$73,507	1,353	38%
Physicians and Surgeons	$213,071	1,151	30%

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Hospitality and Tourism Career Cluster

The Hospitality and Tourism Career Cluster focuses on the management, marketing, and operations of restaurants and other food/beverage services, lodging, attractions, recreation events, and travel-related services. Students acquire knowledge and skills focusing on communication, time management, and customer service that meet industry standards. Students will explore the history of the hospitality and tourism industry and examine characteristics needed for success.

Culinary Arts

The Culinary Arts program of study introduces CTE learners to occupations and educational opportunities related to the planning, directing, or coordinating activities of a food and beverage organization or department. This program of study also explores opportunities involved in directing and participating in the preparation and cooking of food.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3015	Principles of Hospitality & Tourism* ** Course may be taken in middle school.*	1.0
	HTBD	Principles of Hospitality & Tourism	1.0
	H8062	Introduction to Culinary Arts	1.0
Level 2	H8063	Culinary Arts **(Prerequisite: Intro. to Culinary Arts or Prin. of Hos. & Tour.)** *ServSafe Food Handler*	2.0
Level 3	H8064	Advanced Culinary Arts **(Prerequisites: Culinary Arts)** *ServSafe Food Manager IBC*	2.0
Level 4	H8028	Food Science (Science cr.) **(Prerequisite: One credit in biology, chemistry, and at least one credit in a Level 2 or higher course from the Hospitality and Tourism career cluster.)** *Pre-Professional Certification in Food Science Fundamentals IBC*	1.0
	H8021	Practicum in Culinary Arts **(Prerequisites: Culinary Arts)**	2.0
	H6745	Career Preparation I (10 hrs. work week)	2.0
	H8310	Ext. Career Prep. I (15 hrs. work week)	3.0

Arts program of study will fulfill requirements of the Business and Industry endorsement.

Work-Based and Expanded Learning Opportunities

- Participate in Family, Career, and Community Leaders of America, SkillsUSA, American Culinary Federation, or the Texas Restaurant Association
- Plan a catering event or work for a catering company
- Participate in a cooking course
- Work in a restaurant

Postsecondary Opportunities

Associates Degrees
- Hotel and Restaurant Management
- Restaurant Culinary and Catering Management
- Hospitality Administration/ Management, General
- Culinary Arts/ Chef Training

Bachelor's Degrees
- Hotel and Restaurant Management
- Food Service Systems Administration/ Management
- Hospitality Administration/ Management, General
- Culinary Science and Food Service Management

Master's, Doctoral, and Professional Degrees
- Hotel and Restaurant Management
- Food Service Systems Administration/ Management
- Hospitality Administration/ Management, General
- Business Administration Management, General

CAMPUSES OFFERING PROGRAM OF STUDY

LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓		✓		

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Food and Beverage Managers	$55,619	1,561	28%
Chef and Head Cooks	$43,285	1,366	25%
Food Science Technicians	$34,382	236	11%

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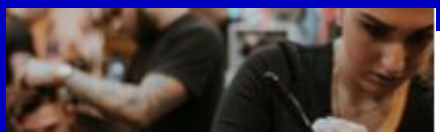
Human Services Career Cluster

The Human Services Career Cluster focuses on preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care services, and consumer services.

Cosmetology and Personal Care Services



The Cosmetology and Personal Care Services regional program of study introduces CTE learners to knowledge and skills related to providing beauty and personal care services. CTE concentrators may learn about or practice managing personal care facilities and coordinating or supervising personal service workers.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	H6652	Principles of Cosmetology Design & Color Theory	1.0
Level 2	H6650	Introduction to Cosmetology (Prerequisite: Prin. of Cosmetology Design & Color Theory.)	1.0
Level 3	H6651	Cosmetology I (Prerequisite: Into. to Cosmetology)	2.0
Level 4	H6657	Cosmetology II (Prerequisite: Cosmetology I) *Cosmetology Operator License IBC*	2.0

Successful completion of 4 or more course credits in the Cosmetology program of study will fulfill requirements of the Public Service endorsement.

Work-Based and Expanded Learning Opportunities

- Participate SkillsUSA
- Job shadow a cosmetologist
- Work part-time at a salon, spa, or barbershop

Postsecondary Opportunities

Certificate/License

- Certified Aesthetic Laser Operator
- Cosmetologist
- Certified Spa Supervisor
- Nail Technician/Specialist and Manicurist

Associates Degrees

- Cosmetology/Cosmetologist, General
- Aesthetician/Esthetician and Skin Care Specialist
- Salon/Beauty Salon Management/Manager
- Cosmetology, Barber/Styling, and Nail Instructor

CAMPUSES OFFERING PROGRAM OF STUDY						
LEE	MAC	TR	WC	JM	RR	CTJ
✓						

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
First-Line Supervisors of Personal Service Workers	$36,941	1,634	24%
Barbers	$28,267	348	14%
Hairdressers, Hairstylists, and Cosmetologists	$21,507	3,489	22%
Manicurists and Pedicurists	$21,715	418	45%
Shampooers	$18,720	139	24%
Skincare Specialists	$26,437	637	22%

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Human Services Career Cluster

The Human Services Career Cluster focuses on preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care services, and consumer services.

Health and Wellness

The Health and Wellness program of study introduces students to knowledge and skills related to promoting physical, emotional, social, and mental health and wellness. Students who choose this program of study may learn how to assist patients in planning for their health and wellness, respond to crises, and advise, provide education or counseling, or make referrals. CTE learners may also focus on addressing barriers to access health and wellness services.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3016	Principles of Human Services* *Course may be taken in middle school.*	1.0
	H6721	Principles of Human Services	1.0
	H8025	Dollars & Sense **(Prerequisite: Prin. of Human Serv.)**	0.5
Level 2	H6764	Child Development **(Prerequisite: Prin. of Human Serv. Or Educ. & Training)** *Pre-Professional Certification in Early Childhood Education IBC*	1.0
	H6754	Human Growth & Development **(Prerequisite: Prin. of Human Serv. Or Educ. & Training)**	1.0
	H8029	Lifetime Nutrition & Wellness **(Prerequisite: Prin. of Human Service, Prin. of Health Sci.)**	0.5
	H8308	Entrepreneurship I **(Prerequisite: Prin. of BMF)** *Entrepreneurship & Small Business IBC*	1.0
Level 3	H8345	Counseling & Mental Health **(Prerequisite: Prin. of Human Serv.)** *Community Health Workers IBC*	1.0
Level 4	H8028	Food Science (Science cr.) **(Prerequisite: One credit in Biology, Chemistry, & at least one credit in a Level 2 or higher course from the Hospitality and Tourism career cluster)** *Pre-Professional Certification in Food Science Fundamentals IBC*	1.0
	H6745	Career Preparation I (10 hrs. work week)	2.0
	H8310	Ext. Career Prep. I (15 hrs. work week)	3.0

Successful completion of 4 or more course credits in the Health and Wellness program of study will fulfill requirements of the Public Service endorsement.

Work-Based and Expanded Learning Opportunities

- Participate in American Association of Family and Consumer Sciences or Family, Career and Community Leaders of America
- Volunteer at a community center
- Intern for a community non-profit organization

Postsecondary Opportunities

Associates Degrees
- Human Development and Family Studies
- Human Services/Sciences, General
- Family and Consumer Sciences
- Community Health Services

Bachelor's Degrees
- Human Development and Family Studies
- Human Services/Sciences, General
- Family and Consumer Sciences
- Child and Family Services

Master's, Doctoral, and Professional Degrees
- Human Development and Family Studies
- Marriage and Family Therapy/Counseling
- Human Services/Sciences
- Family Studies

CAMPUSES OFFERING PROGRAM OF STUDY

LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Child, Family, and School Social Workers	$41,350	2,221	17%
Social and Community Services Managers	$65,146	608	33%
Marriage and Family Therapists	$42,266	217	35%
Social and Human Service Assistants	$32,448	2,822	25%

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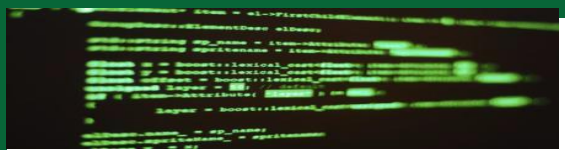
Information Technology Career Cluster

The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

Programming and Software Development



The Programming and Software Development program of study explores the occupations and education opportunities associated with researching, designing, developing, and testing operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computer applications. This program of study may also include exploration into creating, modifying, and testing the codes, forms, and script that allow computer applications to run.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3025	Fundamentals of Computer Science* * *Course may be taken in middle school.*	1.0
	H3032	Fundamentals of Computer Science	1.0
Level 2	H3005	Computer Science I – Honors **(Prerequisite: Algebra I)** *Certified Entry-Level Python Programmer IBC*	1.0
	H3007	AP Computer Science Principles **(Prerequisite: Algebra I)**	1.0
	H8308	Entrepreneurship I **(Prerequisite: Prin. of BMF)** *Entrepreneurship & Small Business IBC*	1.0
Level 3	H3010	AP Computer Science A **(Prerequisite: Algebra I)** (Math or LOTE Cr.)	1.0
	H3006	Computer Science II – Honors **(Prerequisite: Algebra I, Comp. Sci. I, or AP Computer Sci. Prin.)** *Information Technology Specialist: JAVA IBC*	1.0
Level 4	H3027	Computer Science III – Honors **(Prerequisite: Algebra I, Comp. Sci. II Honors)**	1.0
	H8289	CTE Project-Based Capstone **(Prerequisite: Three Courses in a CTE Pathway)**	1.0
	H6745	Career Preparation I (10 hrs. work week)	2.0
	H8310	Ext. Career Prep. I (15 hrs. work week)	3.0

Work-Based and Expanded Learning Opportunities

- Join TSA
- Participate in a coding club at school
- Obtain a programming IBC

Postsecondary Opportunities

Associates Degrees

- Computer Programming/Programmer General
- Computer Software Engineer
- Computer Science
- Certified Software Analyst

Bachelor's Degrees

- Management Information Systems, General
- Computer Software Engineer
- Computer Science
- Information Science/ Studies

Master's, Doctoral, and Professional Degrees

- Computer Software Engineer
- Computer Science
- Information Science/ Studies

CAMPUSES OFFERING PROGRAM OF STUDY

LEE	MAC	TR	WC	JM	RR	CTJ
	✓		✓	✓	✓	✓

Successful completion of 4 or more course credits in the Programming & Software Development program of study will fulfill requirements of the Science, Technology, Engineering, & Mathematics endorsement.

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Software Developer, Systems Software	$103,334	2,985	25%
Software Developers, Application	$104,499	6,311	30%
Computer Programmers	$79,893	1,454	9%

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Law and Public Service Career Cluster

The Law and Public Service Career Cluster focuses on planning, managing, and providing legal services, public safety, protective services, and homeland security, including professional and technical support services. Students will examine the roles and responsibilities of police, courts, corrections, private security, and fire and emergency services.

Law Enforcement

The Law Enforcement program of study teaches CTE learners about the development of, adherence to, and protection of various branches of law. Students will learn how to appropriately and legally respond to breaches in the law according to statutory rules and regulations as well as investigate how and why the breaches occurred.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M8410	Principles of Law, Public Safety, Corrections, & Security* ** Course may be taken in middle school.*	1.0
	H8410	Principles of Law, Public Safety, Corrections, & Security	
Level 2	H6748	Criminal Investigations **(Prerequisite: Prin. of Law)**	1.0
	H8413	Law Enforcement I **(Prerequisite: Prin. of Law)**	1.0
Level 3	H8418	Law Enforcement II **(Prerequisite: Law Enforcement I)** *IAED Emergency Telecommunicator IBC*	1.0
	H8345	Counseling & Mental Health	1.0
Level 4	H8414	Forensic Science (Science Cr.) **(Prerequisites: one credit in Biology, Chemistry, IPC, or Physics.)**	1.0
	H8417	Practicum in Law **(Prerequisite: Law Enforcement II)**	2.0

Successful completion of 4 or more course credits in the Law Enforcement program of study will fulfill requirements of the Public Service Endorsement.

Work-Based and Expanded Learning Opportunities

- Join the Texas Public Service Association or local criminal justice clubs – SkillsUSA
- Attend court hearings and other legal procedures

Postsecondary Opportunities

Associates Degrees
- Criminal Justice/Safety Studies/Law
- Enforcement Administration
- Criminal Justice/Police Science
- Corrections
- Criminalistics and Criminal Science

Bachelor's Degrees
- Criminal Justice/Safety Studies/Law
- Enforcement Administration
- Criminal Justice/Police Science
- Juvenile Corrections
- Cyber/Computer Forensics and Counterterrorism

Master's, Doctoral, and Professional Degrees
- Criminal Justice/Safety Studies/Law
- Enforcement Administration
- Natural Resources
- Law Enforcement and Protective Services

CAMPUSES OFFERING PROGRAM OF STUDY

LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓		✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Police and Sheriff's Patrol Officers	$60,112	5,241	13%
Probation Officers and Correctional Treatment Officers	$44,054	793	9%
Correctional Officers and Jailers	$40,186	4,683	9%
Immigration and Customs Inspectors	$78,104	1,236	9%
First-Line Supervisors of Police and Detectives	$91,312	253	25%.....

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Engineering Career Cluster

The Engineering Career Cluster focuses on the planning, designing, testing, building, and maintaining of machines, structures, materials, systems, and processes using empirical evidence and science, technology, and math principles.

Engineering Foundations

The Engineering Foundations program of study focuses on a wide range of skills applied in the Engineering industry. Students will design, test, and evaluate projects related to engines, machines, and structures. CTE learners will apply scientific, mathematical, and empirical evidence to solve problems through innovation, design, construction, operation and maintenance of different engineering systems.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3019	Principles of Applied Engineering* ** Course may be taken in middle school.*	1.0
	H8250	Principles of Applied Engineering	1.0
Level 2	M3047	Robotics I* **(Prerequisites: Prin. of Applied Engineering.)**	1.0
	H8094	Robotics I **(Prerequisites: Prin. of Applied Engineering.)**	1.0
	H8257	Manufacturing Engineering Tech I **(Prerequisites: Prin. of Applied Engineering.)**	1.0
Level 3	H8252	Engineering Design & Presentation I **(Prerequisites: Algebra I, Prin of Applied Engineering)** *Autodesk Associate Certified User IBC*	1.0
	H6768	Robotics II (Math cr.) **(Prerequisites: Robotics I.)**	1.0
Level 4	H8258	Engineering Design & Problem Solving (Science cr.) **(Prerequisites: Algebra I, Geometry, & at least one credit in a Level 2 or higher in the Career Cluster.)**	1.0
	H8253	Engineering Design & Presentation II **(Prerequisites: Engineering Design & Presentation I, Algebra I, & Geometry)**	2.0
	H8289	CTE Project-Based Capstone **(Prerequisite: Three Courses in a CTE Pathway)**	1.0
	H8259	Scientific Research & Design (Science cr.)	1.0

Successful completion of 4 or more course credits in the Law Enforcement program of study will fulfill requirements of the Public Service Endorsement.

Work-Based and Expanded Learning Opportunities

- Participate in Skills USA competitions - TSA
- Intern at an engineering firm
- Shadow a machinist

Postsecondary Opportunities

Associates Degrees
- Electrical and Electronics Engineering
- Drafting and Design Technology/ Technician, General
- Engineering Technology

Bachelor's Degrees
- Electrical and Electronics Engineering
- CAD/CADD Drafting and/or Design Technology/ Technician
- Bioengineering and Biomedical Engineering
- Construction Engineering Technology/ Technician

Master's, Doctoral, and Professional Degrees
- Electrical and Electronics Engineering
- Mechanical Engineering
- Bioengineering and Biomedical Engineering

CAMPUSES OFFERING PROGRAM OF STUDY

LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓		✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Aerospace Engineers	$110,843	481	9%
Industrial Engineers	$97,074	1,263	10%
Mechanical Engineers	$91,107	1,535	11%
Chemical Engineers	$112,819	474	9%
Electrical Engineers	$98,405	1,137	10%

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CTE|NE

PROGRAM OF STUDY

AGRISCIENCE MAGNET PROGRAM

AMP is a unique educational experience for high school students interested in the many facets of agricultural science and youth leadership through FFA (Future Farmers of America). Our innovative academic magnet school program combines classroom learning with hands-on labs to prepare students for successful careers in food, fiber, and natural resource industries.

Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist.

AMP - Agribusiness, Leadership, and Communications

The Agribusiness, Leadership, and Communications program of study explores the occupations and educational opportunities associated with the business of farming and agriculturally related business that supplies farm inputs, such as machinery and seeds. This program of study may also include exploration into the marketing of farm products, the purchase of farm products either for further processing or resale and grading or classifying unprocessed food or other agricultural products.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3023	Prin. of Ag., Food, & Natural Resources* *Course may be taken at Harris or Wood Middle School	1.0
	H8261	Prin. of Ag., Food, & Natural Resources	1.0
Level 2	H8280	Agribusiness Mgmt. & Marketing **(Prerequisite: Prin. of Ag., Food, & Natural Resources)** *Production Agriculture – Job Ready IBC*	1.0
Level 3	H8274	Agriculture Leadership, Research, & Communications **(Prerequisite: Agribusiness Mgmt. & Marketing)**	1.0
	H8281	Mathematical Applications in AFNR **(Prerequisite: Agribusiness Mgmt. & Marketing)**	1.0
Level 4	H8287	Practicum in Ag., Food, & Natural Resources **(Prerequisites: A minimum of one credit from the courses in the AFNR career cluster)**	2.0
	H8386	Practicum in Ag., Food, & Natural Resources Extended **(Prerequisite: Practicum in Ag., Food, & Natural Resources)**	3.0

Successful completion of 4 or more course credits in the Agribusiness, Leadership and Communications program of study will fulfill requirements of the Business and Industry Endorsement.

Program is only offered at the Agriscience Magnet Program located on the Madison High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Work-Based and Expanded Learning Opportunities

- Participate in Texas FFA
- Participate livestock and agribusiness events
- Internships in Ag specific careers

Postsecondary Opportunities

Associates Degrees
- Agricultural Business and Management, General
- Banking and Financial Support Services
- Advertising
- Marketing/ Marketing Management, General

Bachelor's Degrees
- Agricultural Business and Management, General
- Finance, General
- Financial Mathematics
- Marketing/ Marketing Management, General
- Agricultural Education
- Agriculture Leadership and Communications

Master's, Doctoral, and Professional Degrees
- Agricultural Business and Management, General
- Finance, General
- Financial Mathematics
- Marketing/ Marketing Management, General
- Master of Business Administration
- Certified Public Accountant
- Doctor of Jurisprudence(Law)

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Farmers, Ranchers, and Other Agricultural Managers	$59.134	405	9%
Farm and Ranch Loan Officers	$45,594	268	25%
Buyers and Purchasing Agents, Farm Products	$46,488	268	20%

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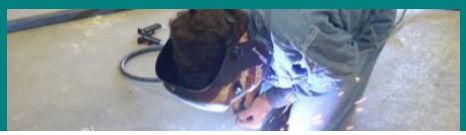
Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist.

AMP - Agricultural Technology and Mechanical Systems



The Agricultural Technology and Mechanical Systems program of study explores the occupations and educational opportunities associated with applying knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing agricultural products. This program of study may also include exploration into diagnosing, repairing, or overhauling farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3023	Prin. of Ag., Food, & Natural Resources* **Course may be taken at Harris or Wood Middle School*	1.0
	H8261	Prin. of Ag., Food, & Natural Resources	1.0
Level 2	H8283	Agricultural Mechanics & Metal Technologies **(Prerequisite: Prin. of Ag., Food, & Natural Resources)** *AWS D9.1 Sheet Metal Welding IBC*	1.0
Level 3	H8282	Agricultural Structures Design & Fab. **(Prerequisite: Agricultural Mechanics & Metal Technologies)**	1.0
	H6772	Agricultural Equipment Design & Fab. *AWS D1.1 Structural Steel IBC*	1.0
	H8284	Agricultural Power Systems **(Prerequisite: Agricultural Mechanics & Metal Technologies)**	2.0
Level 4	H8287	Practicum in Ag., Food, & Natural Resources **(Prerequisites: A minimum of one credit from the courses in the AFNR career cluster)**	2.0
	H8386	Practicum in Ag., Food, & Natural Resources Extended **(Prerequisite: Practicum in Ag., Food, & Natural Resources)**	3.0

Successful completion of 4 or more course credits in the Anticultural Technology and Mechanical Systems program of study will fulfill requirements of the Business and Industry Endorsement.

Work-Based and Expanded Learning Opportunities

- Participate in Texas FFA
- Participate livestock and agribusiness events
- Internships in Ag specific careers

Postsecondary Opportunities

Associates Degrees

- Heavy Equipment Maintenance Technology/ Technician
- Agricultural Mechanization, General
- Small Engine Mechanics and Repair Technology/ Technician
- Welding Technology/ Welder
- Geographic Information Systems

Bachelor's Degrees

- Agricultural Engineering
- Agricultural Mechanization, General
- Agricultural Education
- Construction Technology/Science

Master's, Doctoral, and Professional Degrees

- Agricultural Engineering
- Agricultural Mechanization, Genera
- Masters of Business Administration

Program is only offered at the Agriscience Magnet Program located on the Madison High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Outdoor Power Equipment and Other Small Engine Mechanics	$32,406	366	16%
Welders	$41,350	6171	9%
Farm Equipment Mechanics and Service Technicians	$39,915	304	17%
Mobile Heavy Equipment Mechanics	$47,299	1627	16%
Agricultural Engineers	$64,792	9	13%

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Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist.

AMP - Animal Science

The Animal Science program of study focuses on the science, research, and business of animals and other 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.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3023	Prin. of Ag., Food, & Natural Resources* *Course may be taken at Harris or Wood Middle School*	1.0
	H8261	Prin. of Ag., Food, & Natural Resources	1.0
Level 2	H8069	Small Animal Management **(Prerequisite: Prin. of Ag., Food, & Natural Resources)**	0.5
	H8266	Equine Science **(Prerequisite: Prin. of Ag., Food, & Natural Resources)**	0.5
Level 3	H8265	Livestock Production **(Prerequisites: Small Animal Management & Equine Science)**	1.0
Level 4	H8269	Advanced Animal Science (Science cr.) **(Prerequisites: Biology and Chemistry or IPC; Algebra I, & Geometry; and either Small Animal Management or Equine Science)** *Elanco Fundamentals of Animal Science IBC*	1.0
	H8267	Veterinary Medical Applications **(Prerequisites: either Small Animal Management, Equine Science, or Livestock Production)** *Elanco Vet. Medical Application IBC* *Certified Veterinary Asst., Level 1 IBC*	1.0
	H8287	Practicum in Ag., Food, & Natural Resources **(Prerequisites: A minimum of one credit from the courses in the AFNR career cluster)** *Certified Vet Assistant, Level 1 IBC*	2.0
	H8386	Practicum in Ag., Food, & Natural Resources *Extended* **(Prerequisite: Practicum in Ag., Food, & Natural Resources)**	3.0

Successful completion of 4 or more course credits in the Animal Science program of study will fulfill requirements of the Business and Industry Endorsement.

Work-Based and Expanded Learning Opportunities

- Participate in Texas FFA
- Participate livestock and agribusiness events
- Internships in Ag specific careers

Postsecondary Opportunities

Associates Degrees
- Food Science and Technology
- Veterinary Studies
- Biotechnology Laboratory Technician
- Biology Technician

Bachelor's Degrees
- Animal Sciences
- Agriculture
- Biology
- Zoology/Animal Biology
- Agricultural Education

Master's, Doctoral, and Professional Degrees
- Genetics
- Veterinary Medicine
- Biological and Physical Sciences
- Biological and Biomedical Sciences

Program is only offered at the Agriscience Magnet Program located on the Madison High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Animal Breeders	$39,139	28	9%
Animal Scientists	$57,533	22	12%
Medical Scientists	$63,898	435	27%
Veterinarians	$93,496	294	24%
Zoologists and Wildlife Biologists	$67,309	45	32%

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Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist.

AMP - Environmental and Natural Resources

The Environmental and Natural Resources program of study explores the occupations and educational opportunities associated with the research, design, and planning of engineering or technical duties in the prevention and control of environmental hazards. This program of study may also include exploration into conducting research for the purpose of identifying, abating, or eliminating sources of pollutants or hazards that affect either the environment or the health of the population.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3023	Prin. of Ag., Food, & Natural Resources* *Course may be taken at Harris or Wood Middle School	1.0
	H8261	Prin. of Ag., Food, & Natural Resources	1.0
Level 2	H8263	Wildlife, Fisheries, & Ecology Mgmt. **(Prerequisite: Prin. of Ag., Food, & Natural Resources)** *Natural Resources Systems IBC*	1.0
Level 3	H8066	Energy & Natural Resource Technology **(Prerequisite: Wildlife, Fisheries, & Ecology Mgmt.)**	1.0
Level 4	H6771	Advanced Energy & Natural Resources **(Prerequisite: Energy & Natural Resource Technology)**	1.0
	H8287	Practicum in Ag., Food, & Natural Resources **(Prerequisites: A minimum of one credit from the courses in the AFNR career cluster)**	2.0
	H8386	Practicum in Ag., Food, & Natural Resources Extended **(Prerequisite: Practicum in Ag., Food, & Natural Resources)**	3.0

Successful completion of 4 or more course credits in the Environmental and Natural Resources program of study will fulfill requirements of the Business and Industry Endorsement.

Program is only offered at the Agriscience Magnet Program located on the Madison High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Work-Based and Expanded Learning Opportunities

- Participate in Texas FFA
- Participate livestock and agribusiness events
- Internships in Ag specific careers

Postsecondary Opportunities

Associates Degrees

- Environmental Science
- Environmental Studies
- Wildlife, Fish, and Woodlands Science and Management
- Environmental Engineering Technology/ Environmental Technology

Bachelor's Degrees

- Environmental Science
- Environmental/ Environmental Health Engineering
- Wildlife, Fish, and Woodlands Science and Management
- Natural Resources Law Enforcement and Protective Services
- Agricultural Education
- Recreation, Parks and Tourism

Master's, Doctoral, and Professional Degree

- Environmental Science
- Environmental/ Environmental Health Engineering
- Wildlife, Fish, and Woodlands Science and Management
- Fishing and Fisheries Science and Management

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Environmental Engineering Technicians	$53,352	101	32%
Environmental Engineers	$86,757	288	25%
Environmental Science and Protection Technicians, Including Health	$40,268	508	17%
Environmental Scientists and Specialists, Including Health	$77,896	644	24%
Zoologists and Wildlife Biologists	$67,309	45	32%

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Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist.

AMP - Food Science and Technology

The Food Science and Technology program of study explores the occupations and educational opportunities associated with working with agricultural and food scientists in food, fiber, and animal research, production, and processing. This program of study may also include assisting with animal breeding, nutrition, and conducting tests and experiments to improve yield and quality of crops or to increase the resistance of plants and animals to disease or insects.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3023	Prin. of Ag., Food, & Natural Resources* **Course may be taken at Harris or Wood Middle School*	1.0
	H8261	Prin. of Ag., Food, & Natural Resources	1.0
Level 2	H8262	Food Technology & Safety **(Prerequisite: Prin. of Ag., Food, & Natural Resources)** *Food Safety & Science IBC*	1.0
Level 3	H8268	Food Processing **(Prerequisite: Food Technology & Safety)** *Culinary Meat Selection & Cookery Certification IBC*	1.0
Level 4	H8287	Practicum in Ag., Food, & Natural Resources **(Prerequisites: A minimum of one credit from the courses in the AFNR career cluster)**	2.0
	H8386	Practicum in Ag., Food, & Natural Resources Extended **(Prerequisite: Practicum in Ag., Food, & Natural Resources)**	3.0

Successful completion of 4 or more course credits in the Food Science and Technology program of study will fulfill requirements of the Business and Industry Endorsement.

Program is only offered at the Agriscience Magnet Program located on the Madison High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Work-Based and Expanded Learning Opportunities

- Participate in Texas FFA
- Participate livestock and agribusiness events
- Internships in Ag specific careers

Postsecondary Opportunities

Associates Degrees

- Food Science

Bachelor's Degrees

- Agricultural and Food Products Processing
- Food Science and Nutrition
- Food Science and Technology
- Agricultural Education
- Food Engineering
- Meat Science

Master's, Doctoral, and Professional Degrees

- Food Science and Technology
- Veterinary Science

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Agricultural and Food Science Technicians	$34,382	236	11%
Supervisors of Production and Operating	$62,171	5,094	9%
Inspectors, Testers, Sorters, Samplers, and Weighers	$37,689	6.653	%%

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Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life - food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

AMP - Plant Science

The Plant Science program of study focuses on the science, research, and business of plants and other living organisms. It teaches students how to apply biology and life science to real-world life processes of plants and vegetation, either in laboratories or in the field.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3023	Prin. of Ag., Food, & Natural Resources* **Course may be taken at Harris or Wood Middle School*	1.0
	H8261	Prin. of Ag., Food, & Natural Resources	1.0
Level 2	H8077	Landscape Design & Management **(Prerequisite: Prin. of Ag., Food, & Natural Resources)**	1.0
	H8070	Turf Grass Management **(Prerequisite: Prin. of Ag., Food, & Natural Resources)**	1.0
Level 3	H8278	Floral Design **(Prerequisite: Prin. of Ag., Food, & Natural Resources)** *TSFA Floral Knowledge Base IBC* *TSFA Floral Level 1 IBC*	1.0
	H8275	Horticultural Science **(Prerequisite: One credit from the Career Cluster)**	1.0
Level 4	H8463	Advanced Floral Design **(Prerequisite: Floral Design.)** *TSFA Floral Level 2 IBC*	1.0
	H8277	Advanced Plant & Soil Science (Science cr.) **(Prerequisite: a minimum of one Level 2 or Level 3 course from the Plant Science program of study)**	1.0
	H8287	Practicum in Ag., Food, & Natural Resources **(Prerequisites: A minimum of one credit from the courses in the AFNR career cluster)**	2.0
	H8386	Practicum in Ag., Food, & Natural Resources Extended **(Prerequisite: Practicum in Ag., Food, & Natural Resources)**	3.0

Successful completion of 4 or more course credits in the Plant Science program of study will fulfill requirements of the Business and Industry Endorsement.

Work-Based and Expanded Learning Opportunities

- Participate in Texas FFA
- Participate livestock and agribusiness events
- Internships in Ag specific careers

Postsecondary Opp Opportunities

Associates Degrees
- Applied Horticulture/ Horticulture Operations, General
- Ornamental Horticulture
- Agricultural Business and Management, General
- Turf and Turfgrass Management

Bachelor's Degrees
- Applied Horticulture/ Horticulture Operations, General
- Agronomy and Crop Science
- Agricultural Business and Management, General
- Turf and Turfgrass Management
- Agricultural Education
- Entomology

Master's, Doctoral, and Professional Degrees
- Applied Horticulture/ Horticulture Operations, General
- Agronomy and Crop Science
- Agricultural Business and Management, General
- Farm/Farm and Ranch Management

Program is only offered at the Agriscience Magnet Program located on the Madison High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Soil and Plant Scientists	$54,662	116	21%
Tree Trimmers and Pruners	$32,240	589	14%
Pesticide Handlers, Sprayers, and Applicators	$36.733	196	22%
Landscaping Supervisors	$44,408	807	19%
Biological Technicians	$42,931	452	17%

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CTE|NE

PROGRAM OF STUDY

CAREER & TECHNICAL EDUCATION CENTER

With hands-on learning, qualified instructors, and real-world learning opportunities, you will develop critical expertise in any chosen career before actually graduating. No matter what life you are trying to create, we are here to help build a strong foundation.

Architecture and Construction Career Cluster

The Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management.

CTEC - Carpentry

The Carpentry program of study explores the occupations and educational opportunities related to constructing, installing, or repairing structures and fixtures made of wood, such as concrete forms (including frameworks, partitions, joists, studding, rafters, and stairways). This program of study may also include exploration into installing, dismantling, or moving machinery and heavy equipment according to layout plans, blueprints, or other drawings.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	H6763Cx	Principles of Construction **(SEM. 1)** *NCCER Core IBC*	1.0
	H8243x	Construction Tech. I **(SEM. 2)**	2.0
Level 2	H8244x	Construction Tech. II **(Prerequisite: Construction Tech. I)** *NCCER Carpentry Level 1 IBC*	2.0
Level 3	H8078x	Practicum in Construction Tech. I **(Prerequisite: Construction Tech. II)** *NCCER Carpentry Level 2 IBC*	2.0
Level 4	H8166x	Practicum in Construction Tech. II **(Prerequisite: Practicum in Construction Tech. I)**	2.0

Successful completion of 4 or more course credits in the Carpentry program of study will fulfill requirements of the Business and Industry endorsement.

Program offered at the Career and Technical Education Center (CTEC) and is available to students from any NEISD high school. Students must apply through the magnet application process prior to entry. All courses offered at CTEC require two periods within a student schedule.

Work-Based and Expanded Learning Opportunities

- Shadow a carpenter or millwright
- Participate in SkillsUSA
- Obtain an NCCER certification in Millwright Level 1 or Carpentry Level 1

Postsecondary Opportunities

Associates Degrees
- Carpentry/Carpenter
- Industrial Mechanics and Maintenance Technology

Bachelor's Degrees
- Construction Science

Master's, Doctoral, and Professional Degrees
- Construction Management

CAMPUSES OFFERING PROGRAM						
LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Carpenters	$35,922	5,031	26%
Cost Estimators	$63,939	2,239	21%

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Architecture and Construction Career Cluster

The Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management.

CTEC - Electrical

The Electrical program of study explores the occupations and educational opportunities associated with installing, maintaining, and repairing electrical wiring, equipment, and fixtures. This program of study may also include exploration into installing and repairing telecommunications cable including fiber optics.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	H6763Ex	Principles of Construction **(SEM. 1)** *NCCER Core IBC*	1.0
	H8154x	Electrical Technology I **(SEM. 2)**	1.0
Level 2	H8155x	Electrical Technology II **(Prerequisite: Electrical Technology I)**	2.0
Level 3	H8078x	Practicum in Construction Tech. I **(Prerequisite: Electrical Technology II)**	2.0
Level 4	H8166x	Practicum in Construction Tech. II **(Prerequisite: Practicum in Construction Tech. I)** *-Electrical Apprenticeship Opportunities*	2.0

Successful completion of 4 or more course credits in the Electrical program of study will fulfill requirements of the Business and Industry endorsement.

Program offered at the Career and Technical Education Center (CTEC) and is available to students from any NEISD high school. Students must apply through the magnet application process prior to entry. All courses offered at CTEC require two periods within a student schedule.

Work-Based and Expanded Learning Opportunities

- Shadow an electrician or fiber optics line installer
- Participate in SkillsUSA
- Intern or shadow an electrician

Postsecondary Opportunities

Associates Degrees

- Electrician
- Communications Systems Installation and Repair Technology

Bachelor's Degrees

- Construction Science

Master's, Doctoral, and Professional Degrees

- Construction Management

CAMPUSES OFFERING PROGRAM						
LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Electrical Linemen	$54,184	1,314	28%
Electricians	$44,013	8,460	21%
Electrical and Electronics Installers	$37,544	245	19%
Security and Fire Alarm Installers	$43,638	1,112	22%
Telecommunication Line Installers and Repairers	$49,150	1,228	10%

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Architecture and Construction Career Cluster

The Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management.

CTEC - HVAC and Sheet Metal

The HVAC and Sheet Metal program of study explores the occupations and educational opportunities associated with installing, serving, or repairing heating and air conditioning systems and the fabrication, assembly, installation, and repair of sheet metal products and equipment, such as ducts, control boxes, drainpipes, and furnace casings. This program of study may also include exploration into preparing cost estimates for certain construction projects involving heating and air conditioning and sheet metal.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	H6763Hx	Principles of Construction **(SEM. 1)** *NCCER Core IBC*	1.0
	H8249x	HVAC Technology I **(SEM. 2)**	1.0
Level 2	H8295x	HVAC Technology II **(Prerequisite: HVAC Technology I)** *Refrigerant Handling (EPA 608) IBC*	2.0
Level 3	H8078x	Practicum in Construction Tech. I **(Prerequisite: HVAC Technology II)**	2.0
Level 4	H8166x	Practicum in Construction Tech. II **(Prerequisite: Practicum in Construction Tech. I)**	2.0

Successful completion of 4 or more course credits in the HVAC and Sheet Metal program of study will fulfill requirements of the Business and Industry endorsement.

Program offered at the Career and Technical Education Center (CTEC) and is available to students from any NEISD high school. Students must apply through the magnet application process prior to entry. All courses offered at CTEC require two periods within a student schedule.

Work-Based and Expanded Learning Opportunities

- Shadow an HVAC worker or cost estimator
- Participate in SkillsUSA
- Intern with an HVAC and/or sheet metal company

Postsecondary Opportunities

Associates Degrees

- Business Administration and Management, General
- Mechanical Engineering
- Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/ Technician
- Business/ Commerce, General

Bachelor's Degrees

- Business Administration and Management
- Mechanical Engineering
- Construction Engineering Technology/ Technician
- Business/ Commerce, General
- Construction Management

Master's, Doctoral, and Professional Degrees

- Business Administration and Management
- Mechanical Engineering
- Construction Engineering
- Business/Commerce, General

CAMPUSES OFFERING PROGRAM						
LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Heating, Air Conditioning, and Refrigeration Mechanics	$41,808	3,356	26%
Sheet Metal Workers	$37,419	1,479	17%
Cost Estimators	$63,939	2,239	21%

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Architecture and Construction Career Cluster

The Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management.

CTEC - Plumbing and Pipefitting

The Plumbing and Pipefitting program of study explores the occupations and educational opportunities related to assembling, installing, or repairing pipes, fittings, or fixtures of heating, water, or drainage systems. This program of study may also include exploration into maintaining pipe supports or related hydraulic or pneumatic equipment for steam, hot water, heating, cooling, lubricating, sprinkling, or industrial production or processing systems.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	H6763Px	Principles of Construction **(SEM. 1)** *NCCER Core IBC*	1.0
	H8241x	Plumbing Technology I **(SEM. 2)**	1.0
Level 2	H8242x	Plumbing Technology II **(Prerequisite: Plumbing Technology I)**	2.0
Level 3	H8078x	Practicum in Construction Tech. I **(Prerequisite: Plumbing Technology II)**	2.0
Level 4	H8166x	Practicum in Construction Tech. II **(Prerequisite: Practicum in Construction Tech. I)**	2.0

Successful completion of 4 or more course credits in the Plumbing & Pipe Fitting program of study will fulfill requirements of the Business and Industry endorsement.

Program offered at the Career and Technical Education Center (CTEC) and is available to students from any NEISD high school. Students must apply through the magnet application process prior to entry. All courses offered at CTEC require two periods within a student schedule.

Work-Based and Expanded Learning Opportunities

- Job shadow a plumber, pipefitter, or steamfitter
- Participate in SkillsUSA
- Obtain a Core Curriculum NCCER certification in Pipefitting Level I or Plumbing Level I

Postsecondary Opportunities

Associates Degrees

- Plumbing Technology/ Plumber
- Electrical and Power Transmission Installation/ Installer, General
- Pipefitting/ Pipefitter and Sprinkler Fitter
- High Performance and Custom Engine Technician/ Mechanic

Bachelor's Degrees

- Construction Science
- Operations Management and Supervision

Master's, Doctoral, and Professional Degrees

- Construction Management
- Operations Management and Supervision

CAMPUSES OFFERING PROGRAM						
LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Mechanics, Installers, and Repairers	$63,710	4,243	17%
Plumbers, Pipefitters and Steamfitters	$44,928	5,765	23%
Helpers-Pipelayers, Plumbers, Pipefitters, and Steamfitters	$30,098	1,567	18%
Pipe Installers	$31,616	802	21%

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Manufacturing Career Cluster

The Manufacturing Career Cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering.

CTEC - Welding

The Welding program of study focuses on the development and use of automatic and computer-controlled machines, tools, and robots that perform work on metal or plastic. CTE learners will learn how to modify parts to make or repair machine tools or maintain individual machines, and how to use hand-welding or flame-cutting equipment.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	H8173x	Introduction to Welding **(SEM. 1)** *NCCER Core IBC*	1.0
	H8174x	Welding I **(SEM. 2)**	2.0
Level 2	H8175x	Welding II **(Prerequisite: Introduction to Welding & Welding Technology I)** *AWS D1.1 Structural Steel IBC*	2.0
Level 3	H8179x	Practicum in Welding I **(Prerequisite: Welding Technology II)** *AWS D9.1 Sheet Metal Welding IBC*	2.0
Level 4	H8180x	Practicum in Welding II **(Prerequisite: Practicum in Welding I)**	2.0

Successful completion of 4 or more course credits in the Welding program of study will fulfill requirements of the Business and Industry endorsement.

Program offered at the Career and Technical Education Center (CTEC) and is available to students from any NEISD high school. Students must apply through the magnet application process prior to entry. All courses offered at CTEC require two periods within a student schedule.

Work-Based and Expanded Learning Opportunities

- Participate and compete in SkillsUSA, TSA
- Job shadow a machinist
- Work in a local business or industry apprenticeship
- Join the American Welding Society

Postsecondary Opportunities

Associates Degrees
- Certified Welder or Welder Inspector
- Machine Shop Technology/Assistant
- Industrial Maintenance Technology
- Occupational Safety and Health Technology/Technician

Bachelor's Degrees
- Welding Engineering Technology/Technician
- Biomedical Technology/Technician
- Operations Management and Supervision
- Environmental Health

Master's, Doctoral, and Professional Degrees
- Welding Engineering Technology/Technician
- Occupational Health and Industrial Hygiene
- Operations Management and Supervision
- Environmental Health

CAMPUSES OFFERING PROGRAM						
LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Welders, Cutters, Solderers, and Brazers	$41,350	6,171	9%
Welding Soldering and Brazing Machine Setters, Operators and Tenders	$40,040	280	9%

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Health Science Career Cluster

The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, communicate effectively, and work well with others.

CTEC - Diagnostic and Therapeutic Services

The Diagnostic and Therapeutic Services program of study introduces students to occupations and educational opportunities related to diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study also includes an introduction to the opportunities associated with providing treatment and counsel to patients as well as rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	H8340	Principles of Health Science (Home Campus)	1.0
Level 2	H6757	Medical Terminology (Home Campus)	1.0
Level 3	H3253	Anatomy & Physiology (Home Campus)	1.0
	H8344	Health Science Theory (Home Campus)	1.0
	H8346	Health Science Clinicals (Home Campus) *Phlebotomy Technician IBC*	2.0
	H6758	Medical Microbiology (Home Campus)	1.0
	H8392	Dental Anatomy & Physiology (CTEC) (Dental A) (SEM. 1) (Prerequisites: Principles of Health Science, Medical Terminology, Biology, and Health Science Theory.)	1.0
	H8390	Dental Equipment & Proc. (CTEC) (Dental B) (SEM. 2) (Prerequisites: Principles of Health Science, Medical Terminology, Biology, and Health Science Theory.) *Registered Dental Asst. X-Ray IBC*	1.0
Level 4	H6759	Pathophysiology (Home Campus)	1.0
	H8358	Certified Nurse Aide (CTEC) (Prerequisites: Principles of Health Science, Medical Terminology, Biology, and Health Science Theory.) *Certified Nurse Aide IBC*	2.0
	H8360	Certified Medical Assistant (CTEC) (Prerequisites: Principles of Health Science, Medical Terminology, Biology, and Health Science Theory.) *Certified Clinical Medical Asst. IBC*	2.0
	H8354	Emergency Medical Technician (CTEC) (Prerequisites: Principles of Health Science, Medical Terminology, Biology, and Health Science Theory.) *Emergency Medical Technician IBC*	2.0
	H3254	Pharmacy Technician (CTEC) (Prerequisites: Principles of Health Science, Medical Terminology, Biology, and Health Science Theory.) *Pharmacy Technician IBC*	2.0

Work-Based and Expanded Learning Opportunities

- Participate in SkillsUSA or Health Occupation Students of America
- Volunteer at a community wellness center, hospital, assisted living, or nursing home

Postsecondary Opportunities

Associates Degrees
- Dental Hygienist
- Surgical Technician
- Medical Laboratory Technology
- Respiratory Therapy
- Nuclear Medicine Technology/Technologist
- Magnetic Resonance Imaging (MRI) Technology/Technician

Bachelor's Degrees
- Public Health
- Medical Laboratory Technology
- Respiratory Therapy
- Registered Nurse
- Health Educator
- Radiologic Technology

Master's, Doctoral, and Professional Degrees
- Radiologic Technology
- Master of Science in Dentistry
- Physician Assistant
- Family and General Practitioners
- Pharmaceutical
- Physician

Program offered at the Career and Technical Education Center (CTEC) and is available to students from any NEISD high school. Students must apply through the magnet application process prior to entry. All courses offered at CTEC require two periods within a student schedule.

CAMPUSES OFFERING PROGRAM

LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Medical Assistants	$29,598	8,862	30%
Surgical Technologists	$45,032	1,150	20%
Dental Hygienists	$73,507	1,353	38%
Physicians and Surgeons	$213,071	1,151	30%

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Transportation, Distribution, and Logistics Career Cluster

The Transportation, Distribution, and Logistics Career Cluster focuses on careers in planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

CTEC - Automotive and Collision Repair

The Automotive and Collision Repair program of study teaches CTE learners how to repair automobiles and service various types of vehicles. CTE learners may learn to collect payment for services or supplies and perform typical vehicle maintenance procedures such as lubrication, oil changes, installation of antifreeze, or replacement of accessories like wiper blades or tires.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	H8126x	Small Engine Technology I	1.0
	H7777x	Automotive Basics *ASE Refrigerant Recovery & Recycling IBC*	1.0
	H7777Dx	Automotive Basics - Dual Credit *ASE Refrigerant Recovery & Recycling IBC*	
Level 2	H8112x	Automotive Technology I **(Prerequisite: Automotive Basics)**	2.0
	H8112Dx	Automotive Technology I – Dual Credit **(Prerequisite: Automotive Basics)**	
Level 3	H8113x	Automotive Technology II **(Prerequisite: Automotive Technology I)** *ASE Entry Level – Auto Maintenance & Light Repair IBC*	2.0
	H8113Dx	Automotive Technology II – Dual Credit **(Prerequisite: Automotive Technology I)** *ASE Entry Level – Auto Maintenance & Light Repair IBC*	
Level 4	H8114x	Practicum in Transportation Systems **(Prerequisite: Automotive Technology II)**	2.0
	H8114Dx	Practicum in Transportation Systems – Dual Credit **(Prerequisite: Automotive Technology II)**	

Program offered at the Career and Technical Education Center (CTEC) and is available to students from any NEISD high school. Students must apply through the magnet application process prior to entry. All courses offered at CTEC require two periods within a student schedule.

Work-Based and Expanded Learning Opportunities

- Join SkillsUSA or the Automotive Service Association
- Work at a local automotive repair or body shop

Postsecondary Opportunities

Associates Degrees

- Autobody/ Collision and Repair Technology/ Technician
- Medium/Heavy Vehicle and Truck Technology/ Technician
- Mechanical Engineering/ Mechanical Technology/ Technician

Bachelor's Degrees

- Mechanical Engineering/ Mechanical Technology/ Technician

Master's, Doctoral, and Professional Degrees

- Mechanical Engineering

CAMPUSES OFFERING PROGRAM						
LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Automotive Body and Related Repairers	$40,144	1,456	25%
Automotive Service Technician and Mechanics	$38,459	5,557	18%

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Transportation, Distribution, and Logistics Career Cluster

The Transportation, Distribution, and Logistics Career Cluster focuses on careers in planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

CTEC - Diesel, Heavy Equipment Maintenance, and Commercial Drivers

The Diesel, Heavy Equipment Maintenance, and Commercial Drivers program of study teaches students to inspect, diagnose, repair systems on off-highway, on-highway vehicles and equipment.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	H8190x	Occupational Safety & Environmental Tech I **(Sem. 1)** *ASE Refrigerant Recovery & Recycling IBC*	1.0
	H6734x	Principles of Transportation Systems **(Sem. 2)**	1.0
Level 2	H6774x	Diesel Technology I **(Prerequisite: Occupational Safety & Environmental Tech I, & Principles of Transportation Systems)**	2.0
Level 3	H6775x	Diesel Technology II **(Prerequisite: Diesel Technology I)** *ASE Entry Level Medium/Heavy , Diesel Engines IBC*	2.0
Level 4	H8114x	Practicum in Transportation Systems **(Prerequisite: Diesel Technology II)**	2.0

Successful completion of 4 or more course credits in the Diesel, Heavy Equipment Maintenance, and Commercial Driver program of study will fulfill requirements of the Business and Industry endorsement.

Work-Based and Expanded Learning Opportunities

- Participate in SkillsUSA
- Volunteer or work part time for a diesel engine repair shop

Postsecondary Opportunities

Associates Degrees

- Diesel Mechanics Technology/ Technician
- Heavy Equipment Maintenance Technology/ Technician

Bachelors

- Logistics, Materials, and Supply Chain Management

Master's Doctoral and Professional Degrees

- Logistics, Materials, and Supply Chain Management

Program offered at the Career and Technical Education Center (CTEC) and is available to students from any NEISD high school. Students must apply through the magnet application process prior to entry. All courses offered at CTEC require two periods within a student schedule.

CAMPUSES OFFERING PROGRAM						
LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Bus and Truck Mechanics and Diesel Engine Specialists	$44,574	3,150	21%
Mobile Heavy Equipment Mechanics, Except Engines	$47,299	1,627	16%

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CTE|NE

DATA

PROGRAM OF STUDY

DESIGN & TECHNOLOGY ACADEMY

DATA is an open enrollment magnet school program that provides innovative education to middle and high school students in San Antonio, regardless of school district boundaries. With pathways in multimedia arts, digital communications, architectural design, and design & art, students are prepared for college and career through advanced academics and industry certifications.

Architecture and Construction Career Cluster

The Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management.

DATA - Architectural Drafting and Design

The Architectural Drafting and Design program of study explores the occupations and educational opportunities associated with developing, engineering, and designing building structures and facilities. This program of study may also include exploration into collecting and interpreting geographic information, researching and preparing maps, and interior design.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3032	Principles of Architecture* ** DATA students may take in middle school.*	1.0
Level 2	H8245	Architectural Design I **(Prerequisite: Principles of Architecture)**	1.0
	H8044	Interior Design I **(Prerequisite: Principles of Architecture)**	1.0
Level 3	H8246	Architectural Design II **(Prerequisite: Architecture Design I)** *Autodesk Associate User – Revit*	2.0
	H8006	Interior Design II **(Prerequisite: Interior Design I)**	2.0
Level 4	H8247	Practicum in Architectural Design **(Prerequisite: Architecture Design II, or Interior Design II)**	2.0

Successful completion of 4 or more course credits in the Architectural Design program of study will fulfill requirements of the Business and Industry Endorsement.

Program is only offered at the Design and Technology Academy (DATA) located on the Roosevelt High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Work-Based and Expanded Learning Opportunities

- Shadow an architect, interior designer or civil engineer
- Participate in SkillsUSA/TSA
- Intern at an architectural firm
- ACE Mentorship Program
- AIAS Membership

Postsecondary Opportunities

Associates Degrees
- Architecture
- Interior Design
- Civil Engineering, General
- Geographic Information Science and Cartography

Bachelor's Degrees
- Architecture
- Interior Design
- Civil Engineering, General
- Geographic Information Science and Cartography

Master's, Doctoral, and Professional Degrees
- Architecture
- Interior Architecture
- Civil Engineering, General
- Geographic Information Science and Cartography

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Architects	$77,043	808	16%
Geographic Information Analysts and Surveyors	$58,926	162	27%
Architectural/ Civil Drafters	$50,170	1,068	9%
Construction Managers	$87,402	2,401	14%

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Arts, Audio/Video Technology, and Communications Career Cluster

The Arts, A/V Technology and Communications (AAVTC) Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services. Careers in the AAVTC career cluster require a creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication.

DATA - Digital Communications

The Digital Communications program of study explores the occupations and educational opportunities associated with the production of audio and visual media formats for various purposes, such as TV broadcasts, advertising, video production, or motion pictures. This program of study may also include exploration into operating machines and equipment to record sound and images, such as microphones, sound speakers, video screens, projectors, video monitors, sound and mixing boards, and

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3020	Principles of Arts, A/V, & Comm.* ** DATA students may take in middle school.*	1.0
	H6656	Principles of Arts, A/V, & Comm.	1.0
Level 2	H6731	Audio/Video Production I **(Prerequisite: Prin. of A/V)**	1.0
	H6744	Digital Design & Media Production **(Prerequisite: Prin. of A/V, 3D Modeling & Animation. Or Video Game Design)**	2.0
Level 3	H6741	Audio/Video Production II **(Prerequisite: Audio/Video Production I)** *Adobe Certified Professional IBC*	1.0
	H6742	Audio/Video Production II with lab **(Prerequisite: Audio/Video Production I)** *Adobe Certified Professional IBC*	2.0
Level 4	H6761	Practicum in Audio/Video Production **(Prerequisite: Audio/Video Production II)**	2.0

Program is only offered at the Design and Technology Academy (DATA) located on the Roosevelt High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Work-Based and Expanded Learning Opportunities

- Shadow a production team
- Participate in SkillsUSA or TSA
- Intern at a local television station or video production company
- Work with a local company on a project

Postsecondary Opportunities

Associates Degrees
- Recording Arts Technology/Technician
- Cinematography and Film/Video Production
- Radio and Television Broadcasting Technology/Technician
- Music Technology

Bachelor's Degrees
- Recording Arts Technology/Technician
- Cinematography and Film/Video Production
- Radio and Television
- Agricultural Communication/Journalism

Master's, Doctoral, and Professional Degrees
- Communications Technology/Technician
- Cinematography and Film/Video Production
- Radio and Television
- Agricultural Communication/Journalism

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Sound Engineering Technicians	$39,562	79	27%
Camera Operators, Television, Video, and Motion Picture	$50,024	129	9%
Audio and Video Equipment Technicians	$40,581	757	29%
Film and Video Editors	$47,382	118	23%

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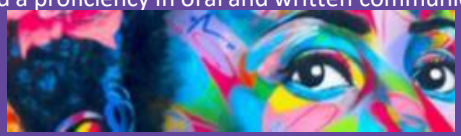
Arts, Audio/Video Technology, and Communications Career Cluster

The Arts, A/V Technology and Communications (AAVTC) Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services. Careers in the AAVTC career cluster require a creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication.

DATA - Graphic Design and Interactive Media



The Graphic Design and Multimedia Arts program of study explores the occupations and educational opportunities associated with designing or creating graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. This program of study may also include exploration into designing clothing and accessories, and creating special effects, animation, or othervisual images using film, video, computers, or other electronic tools and media, for use in computer games, movies, music videos, and commercials.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M6700	Video Game Design*	1.0
	M3020	Principles of Arts, A/V, & Comm.*	1.0
	M3011	Digital Media*	1.0
	H6700	Video Game Design	1.0
	H6656	Principles of Arts, A/V, & Comm.	1.0
	H3036	3-D Modeling & Animation (Fine Art cr.)	1.0
Level 2	M3024	Digital Design & Media Production*	1.0
	M3027	Graphic Design and Illustration I*	1.0
	H6711	Animation I **(Prerequisite: Prin. of A/V)**	1.0
	H6732	Commercial Photography I **(Prerequisite: Prin. of A/V)**	1.0
	H3037	Video Game Programming & Design **(Prerequisite: Prin. of A/V)**	1.0
	H6744	Digital Design & Media Production **(Prerequisite: Prin. of A/V)**	1.0
	H6730	Graphic Design & Illustration I **(Prerequisite: Prin. of A/V)**	1.0
	H6715	Digital Art & Animation **(Prerequisite: Any Level 2 in the pathway)**	1.0
Level 3	H6713	Animation II **(Prerequisite: Animation I)**	1.0
	H6714	Animation II w/ Lab **(Prerequisite: Animation I)**	2.0
	H6735	Commercial Photography II **(Prerequisite: Commercial Photography I)**	1.0
	H3038	Adv. Video Game Programming **(Prerequisite: Game Programming & Design)**	1.0
	H6752	Graphic Design & Illustration II **(Prerequisite: Graphic Design & Illustration I)** *All courses – Adobe Certified Professional IBC*	1.0
Level 4	H6760	Practicum in Animation **(Prerequisite: Animation II)** C++ Certified Associate Programmer IBC	2.0
	H6736	Practicum in Commercial Photography **(Prerequisite: Commercial Photography II)**	2.0
	H6762	Practicum in Graphic Design & Illustration **(Prerequisite: Graphic Design & Illustration II)**	2.0

Work-Based and Expanded Learning Opportunities

- Join a website development or coding club
- Participate in SkillsUSA or TSA
- Intern with a multimedia or animation studio
- Obtain a certificate or certification in graphic design

Postsecondary Opportunities

Associates Degrees
- Animation, Interactive Technology, Video Graphics and Special Effects
- Graphic Design
- Game and Interactive Media Design

Bachelor's Degrees
- Animation, Interactive Technology, Video Graphics and Special Effects
- Graphic Design
- Game and Interactive Media Design

Master's, Doctoral, and Professional Degrees
- Animation, Interactive Technology, Video Graphics and Special Effects
- Graphic Design
- Intermedia/Multimedia

Successful completion of 4 or more course credits in the Multimedia program of study will fulfill requirements of the Business and Industry endorsement.

Program is only offered at the Design and Technology Academy (DATA) located on the Roosevelt High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

** DATA students may take in middle school.*

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iCSI

PROGRAM OF STUDY

INSTITUTE OF CYBERSECURITY

iCSI is an open enrollment magnet school program that provides innovative education to high school students in San Antonio, regardless of school district boundaries. Focused on cybersecurity & networking, students are prepared for college and career through advanced academics and industry certifications.

Information Technology Career Cluster

The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

iCSI - Cybersecurity

The Cybersecurity program of study includes the occupations and educational opportunities related to planning, implementing, upgrading, or monitoring security measure for the protection of computer networks and information. This program of study may also include exploration into responding to computer security breaches and virus and administering network security measures.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	H6658	Computer Maintenance (Cyber 1A)	1.0
	H6766	Principles of Cybersecurity (Cyber 1B) *Comp TIA IT Fundamentals IBC*	1.0
Level 2	H6756	Networking with Lab (Cyber 2) *Comp TIA Network + IBC*	2.0
Level 3	H6794	Cybersecurity Capstone (Cyber 3A)	1.0
	H6795	Adv. Cloud Computing (Cyber 3B) *Comp TIA Security + IBC*	1.0
Level 4	H6698	Practicum in Information Tech. (Cyber 4) *Cisco 200-201 CBROPS IBC*	2.0

Successful completion of 4 or more course credits in the Cybersecurity program of study will fulfill requirements of the Science, Technology, Engineering, & Mathematics endorsement.

Program offered at the Institute of CyberSecurity and Innovation (iCSI) and is available to students from any NEISD high school. Students must apply through the magnet application process prior to entry. All courses offered at iCSI require two periods within a student schedule.

Work-Based and Expanded Learning Opportunities

- Join TSA
- Job shadow a computer system analyst or information security analyst
- Obtain a cybersecurity IBC
- Join Cyber Patriot club

Postsecondary Opportunities

Associates Degrees

- System Networking, and LAN/WAN Management
- Information Technology
- Computer and Information Sciences, General
- Computer Science

Bachelor's Degrees

- Computer Systems Networking and Telecommunications
- Computer Systems Networking and Telecommunications
- Computer and Information Sciences, General
- Computer Science

Master's, Doctoral, and Professional Degrees

- Computer Systems Analysis/Analyst
- Information Technology
- Computer Information Sciences, General
- Computer Science

CAMPUSES OFFERING PROGRAM						
LEE	MAC	TR	WC	JM	RR	CTJ
✓	✓	✓	✓	✓	✓	✓

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Information Security Analysts	$91,915	814	29%
Network and Computer System Administrators	$82,597	2,814	19%
Computer System Analysts	$87,568	5,937	29%

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CTE | NE

SETA

PROGRAM OF STUDY

SPACE & ENGINEERING TECHNOLOGIES ACADEMY

SETA is an open enrollment magnet school program that provides innovative education to middle and high school students in San Antonio, regardless of school district boundaries. With four engineering pathways, students can select aerospace, aviation technology, computer science, or manufacturing & mechanical engineering. These pathways, along with our Space Act Agreement with NASA, prepare students for college and career through advanced academics and industry certifications.

Transportation, Distribution, and Logistics Career Cluster

The Transportation, Distribution, and Logistics Career Cluster focuses on careers in planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

SETA – Aviation Pilots

The Aviation regional program of study introduces CTE learners to the occupations and education opportunities related to understanding the principles and science of flight, aviation engineering, air navigational aids, air traffic controls, and communications equipment to ensure conformance with federal safety regulations.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3026	Introduction to Aerospace & Aviation* ** SETA students make take in middle school.*	1.0
	H8121	Introduction to Aerospace & Aviation	1.0
	M3030	Introduction to Aircraft Technology* ** SETA students make take in middle school.*	1.0
	H8120	Introduction to Aircraft Technology	1.0
Level 2	H8125	Introduction to Unmanned Aerial Vehicle Flight **(Prerequisites: Introduction to Aircraft Technology)** *FAA Part 107 Remote Drone Pilot IBC*	1.0
Level 3	H8356	Aerospace Engineering **(Prerequisites: Introduction to Unmanned Aerial Vehicle Flight)**	1.0
Level 4	H8259	Scientific Research & Design	1.0

Successful completion of 4 or more course credits in the Aviation program of study will fulfill requirements of the Business & Industry endorsement.

Program is only offered at the Space and Engineering Technologies Academy (SETA) located on the Roosevelt High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Work-Based and Expanded Learning Opportunities

- Participate in SkillsUSA
- Explore virtual aviation websites
- Work in an aviation apprenticeship or internship
- Work for a drone company

Postsecondary Opportunities

Associates Degrees

- Airline Pilots, Copilots, and Flight Engineers

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Aerospace Engineering and Operations Technicians	$60,757	114	9%
Airline Pilots, Copilots, and Flight Engineers	$165,130	1,150	9%
Commercial Pilots	$86,310	548	9%

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Transportation, Distribution, and Logistics Career Cluster

The Transportation, Distribution, and Logistics Career Cluster focuses on careers in planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

SETA - Aviation Maintenance

The Aviation Maintenance program of study introduces students to the occupations and education opportunities related to inspecting aircraft, maintenance procedures, air navigational aids, air traffic controls, and communications equipment to ensure conformance with federal safety regulations.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	H8120	Introduction to Aircraft Technology	1.0
Level 2	N/A	N/A	N/A
Level 3	H6783Dx	Alamo Academies Aerospace Tech I (Prerequisite: Introduction to Aerospace & Aviation.)	3.0
Level 4	H6785Dx	Alamo Academies Aerospace Tech II (Prerequisite: Alamo Academies Aerospace Tech I)	3.0

Successful completion of 4 or more course credits in the Aviation program of study will fulfill requirements of the Business & Industry endorsement.

Program is only offered at the Space and Engineering Technologies Academy (SETA) located on the Roosevelt High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Work-Based and Expanded Learning Opportunities

- Participate in SkillsUSA
- Explore virtual aviation websites
- Work in an aviation apprenticeship or internship
- Work for a drone company

Postsecondary Opportunities

Associate Degrees

- Avionics Maintenance Technology/ Technician
- Aircraft Powerplant Technology/ Technician
- Airframe Mechanics and Aircraft Maintenance Technology/ Technician

Bachelor's Degrees

- Airframe Mechanics and Aircraft Maintenance Technology/ Technician

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Aerospace Engineering and Operations Technicians	$60,757	114	9%
Airline Pilots, Copilots, and Flight Engineers	$165,130	1,150	9%
Commercial Pilots	$86,310	548	9%

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Engineering Career Cluster

The Engineering Career Cluster focuses on planning, managing, and providing, scientific research and professional and technical services, including laboratory and testing services, and research and development services.

SETA - Engineering Foundations – Aerospace

The Engineering Foundations program of study focuses on a wide range of skills applied in the Engineering industry. Students will design, test, and evaluate projects related to engines, machines, and structures. CTE learners will apply scientific, mathematical, and empirical evidence to solve problems through innovation, design, construction, operation and maintenance of different engineering systems.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3019	Principles of Applied Engineering* ** SETA students may take in middle school.*	1.0
	H8250	Principles of Applied Engineering	1.0
	H8257	Manufacturing Engineering Tech I	1.0
Level 2	H8252	Engineering Design & Presentation I **(Prerequisite: Prin of Applied Engineering & Algebra I)**	1.0
Level 3	H8356	Aerospace Engineering **(Prerequisites: Engineering Design & Presentation I.)** *Autodesk Associate Certified User IBC*	1.0
Level 4	H8258	Engineering Design & Problem Solving (Science Cr.) **(Prerequisites: Algebra I, Geometry & at least one credit in a Level 2 or higher in the Career Cluster.)**	1.0
	H8260	Practicum in STEM **(Prerequisite: Algebra I & Two STEM Career Cluster Credits.)**	2.0

Successful completion of 4 or more course credits in the Engineering program of study will fulfill requirements of the STEM endorsement.

Program is only offered at the Space and Engineering Technologies Academy (SETA) located on the Roosevelt High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Exploration Activities Work-Based Learning Activities

- Participate in Skills USA, TSA competitions
- Intern at an engineering firm
- Shadow a machinist

Postsecondary Opportunities

Associate Degrees
- Construction Technology
- Drafting and Design Technology/ Technician
- Surveying

Bachelor's Degrees
- Civil Engineering
- Geotechnical Engineering
- Mining Engineering
- Marine Engineering
- Construction Engineering Technology

Master's, Doctoral, and Professional Degrees
- Structural Engineering
- Environmental Engineering
- Wind Science Engineering

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Aerospace Engineers	$110,843	481	9%
Industrial Engineers	$97,074	1,263	10%
Mechanical Engineers	$91,107	1,535	11%
Chemical Engineers	$112,819	474	9%
Electrical Engineers	$98,405	1,137	105

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Manufacturing Career Cluster

The Manufacturing Career Cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering.

SETA - Robotics and Automation Technology

The Robotics and Automation Technology program of study focuses on the assembly, operation, maintenance, and repair of electromechanical equipment or devices. CTE learners may work in a variety of mechanical fields, gaining knowledge and experience in robotics, refinery and pipeline systems, deep ocean exploration, or hazardous waste removal. CTE concentrators may work in a variety of fields of engineering.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3019 M3021	Principles of Applied Engineering* Principles of Manufacturing* ** SETA students may take in middle school.*	1.0 1.0
	H8250	Principles of Applied Engineering	1.0
	H8094	Robotics I **(Prerequisites: Prin. of Applied Engineering.)**	1.0
Level 2	H8363	Programmable Logic Controller I **(Prerequisites: Prin. of Applied Engineering.)** *FANUC Robot Operator I IBC*	1.0
Level 3	H6768	Robotics II (Math Cr.) **(Prerequisites: Robotics I.)**	1.0
	H8364	Programmable Logic Controller II **(Prerequisites: Programmable Logic Controller I.)**	1.0
Level 4	H8273	Practicum in Manufacturing **(Prerequisite: Two STEM Career Cluster Credits.)**	2.0

Successful completion of 4 or more course credits in the Robotics and Automation Technology program of study will fulfill requirements of the Business and Industry endorsement.

Program is only offered at the Space and Engineering Technologies Academy (SETA) located on the Roosevelt High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Exploration Activities
Work-Based Learning Activities

- Participate in SkillsUSA, TSA, and local STEM events
- Work at a local business or industry apprenticeship
- Join the American Welding Society

Postsecondary Opportunities

Associates Degrees
- Electromechanical Engineering/Technology
- Automation Robotics and Control Technology
- Certified Quality Technician
- Industrial Mechanics and Maintenance Technology
- Mechatronics Technology
- Semiconductor Processing Technician

Bachelor's Degrees
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

Master's, Doctoral, and Professional Degrees
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Electro-Mechanical Assemblers	$30,160	951	9%
Electro-Mechanical Technicians	$56,555	127	9%
Industrial Machinery Mechanics	$49,816	3,788	27%

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Information Technology Career Cluster

The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

SETA - Programming and Software Development

The Programming and Software Development program of study explores the occupations and education opportunities associated with researching, designing, developing, and testing operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computer applications. This program of study may also include exploration into creating, modifying, and testing the codes, forms, and script that allow computer applications to run.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3025	Fundamentals of Computer Science* ** SETA students make take in middle school.*	1.0
Level 2	H3005	Computer Science I – Honors **(Prerequisite: Algebra I)** *Certified Entry-Level Python Programmer (PCEP) IBC*	1.0
Level 3	H3010	AP Computer Science A (Math or LOTE Cr.) **(Prerequisite: Algebra I)**	1.0
	H3006	Computer Science II – Honors **(Prerequisite: Alegebra I, Comp. Sci. I, or AP Computer Sci. Prin.)** *Information Technology Specialist: JAVA IBC*	1.0
Level 4	H3027	Computer Science III – Honors **(Prerequisite: Algebra I, Comp. Sci. II Honors)**	1.0
	H6698	Practicum in Information Technology **(Prerequisite: Two STEM Career Cluster Credits.)**	2.0

Programming & Software Development program of study will fulfill requirements of the Science, Technology, Engineering, & Mathematics endorsement.

Program is only offered at the Space and Engineering Technologies Academy (SETA) located on the Roosevelt High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Work-Based Learning and Expanded Learning Opportunities

- Join TSA
- Participate in a coding club at school
- Obtain a programming IBC

Postsecondary Opportunities

Associates Degrees
- Computer Programming/Programmer General
- Computer Software Engineer
- Computer Science
- Certified Software Analyst

Bachelor's Degrees
- Management Information Systems, General
- Computer Software Engineer
- Computer Science
- Information Science/ Studies

Master's, Doctoral, and Professional Degrees
- Computer Software Engineer
- Computer Science
- Information Science/ Studies

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Software Developer, Systems Software	$103,334	2,985	25%
Software Developers, Application	$104,499	6,311	30%
Computer Programmers	$79,893	1,454	9%

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CTE|NE

PROGRAM OF STUDY

SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS ACADEMY

STEM Academy is an open enrollment magnet school program that provides innovative education to middle and high school students in San Antonio, regardless of school district boundaries. With specialized pathways focused on science, technology, engineering, and mathematics, STEM prepares students for college and career through advanced academics and industry certifications.

Health Science Career Cluster

The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, communicate effectively, and work well with others.

STEM - Biomedical Science

The Biomedical Science program of study focuses on the study of biology and medicine in order to introduce CTE learners to the knowledge and skills necessary to be successful in the healthcare field, such as researching and diagnosing diseases, pre-existing conditions, or other determinants of health. Students may also practice patient care and communication.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	H8342	Biotechnology I **(Prerequisite: Algebra I)** *Biotechnology Aptitude & Competency Exam IBC*	1.0
Level 2	H6758	Medical Microbiology (Science Cr.) **(Prerequisites: Biology, Chemistry & at least one credit in a Level 2 course from the Health Sci. career cluster.)**	1.0
Level 3	H3253	Anatomy & Physiology (Science Cr.) **(Prerequisite: Algebra I)**	1.0
Level 4	H6759	Pathophysiology **(Prerequisites: Biology, Chemistry & at least one credit in a Level 2 course from the Health Sci. career cluster.)**	
Level 4	H8260	Practicum in STEM **(Prerequisite: Algebra I, & Two STEM Career Cluster Credits.)**	

Successful completion of 4 or more course credits in the Biomedical Science program of study along with Algebra II, Chemistry, & Physics will fulfill requirements of the Science, Technology, Engineering, & Mathematics endorsement.

Program is only offered at the Science, Technology, Engineering and Mathematics (STEM) Academy located on the Legacy of Educational Excellence High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Work-Based Learning and Expanded Learning Opportunities

- Join Health Occupations Students of America (HOSA)
- Intern at a lab
- Shadow a healthcare or medical professional

Postsecondary Opportunities

Associates Degrees

- Histologic Technician
- Clinical Laboratory Science/Medical Technology/Technologist

Bachelor's Degrees

- Biomedical Engineers
- Clinical Laboratory Science/Medical Technology/Technologist

Master's, Doctoral, and Professional Degrees

- Genetic Counseling
- Medical Scientists
- Epidemiology

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Medical and Laboratory Technicians	$37,981	1,159	28%
Biological Technicians	$42,931	452	17%
Forensic Science Technicians	$48,152	171	35%
Chemical Technicians	$49,733	672	10%
Medical and Clinical Laboratory Technologists	$58,760	1,166	35%

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Engineering Career Cluster

The Engineering Career Cluster focuses on the planning, designing, testing, building, and maintaining of machines, structures, materials, systems, and processes using empirical evidence and science, technology, and math principles.

STEM - Engineering Foundations

The Engineering Foundations program of study focuses on a wide range of skills applied in the Engineering industry. Students will design, test, and evaluate projects related to engines, machines, and structures. CTE learners will apply scientific, mathematical, and empirical evidence to solve problems through innovation, design, construction, operation and maintenance of different engineering systems.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3019 H8250	Principles of Applied Engineering* ** STEM Students make take in middle school.* Principles of Applied Engineering	1.0 1.0
Level 2	H8252	Engineering Design & Presentation I **(Pre requisites: Algebra I & Prin. of Applied Engineering)** *Autodesk Associate Certified User IBC*	1.0
Level 3	H8258	Engineering Design & Problem Solving (Science Cr.) **(Prerequisites: Algebra I, Geometry, & at least one credit in a Level 2 or higher in the Career Cluster.)** *Certified SolidWorks Associate IBC*	1.0
Level 4	H8260	Practicum in STEM **(Prerequisite: Algebra I, & Two STEM Career Cluster Credits.)**	2.0

Successful completion of 4 or more course credits in the Engineering program of study along with Algebra II, Chemistry, & Physics will fulfill requirements of the Science, Technology, Engineering, & Mathematics endorsement.

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Work-Based and Expanded Learning Opportunities

- Participate in FIRST (FRC) Robotics Competition team
- Intern at an engineering firm
- Shadow an engineer
- Tour job sites
- Earn two (2) IBCs

Postsecondary Opportunities

Associates Degrees

- Electrical and Electronics Engineering
- Drafting and Design Technology/ Technician, General
- Engineering Technology

Bachelor's Degrees

- Electrical and Electronics Engineering
- CAD/CADD Drafting and/or Design Technology/ Technician
- Bioengineering and Biomedical Engineering
- Construction Engineering Technology/ Technician

Master's, Doctoral, and Professional Degrees

- Electrical and Electronics Engineering
- Mechanical Engineering
- Bioengineering and Biomedical Engineering

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Aerospace Engineers	$110,843	481	9%
Industrial Engineers	$97,074	1,263	10%
Mechanical Engineers	$91,107	1,535	11%
Chemical Engineers	$112,819	474	9%
Electrical Engineers	$98,405	1,137	10%

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Informational Technology Career Cluster

The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

STEM - Programming and Software Development

The Programming and Software Development program of study explores the occupations and education opportunities associated with researching, designing, developing, and testing operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computer applications. This program of study may also include exploration into creating, modifying, and testing the codes, forms, and script that allow computer applications to run.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3025	Fundamentals of Computer Science* * *STEM Students make take in middle school.*	1.0
	H3032	Fundamentals of Computer Science	1.0
Level 2	H3005	Computer Science I – Honors **(Prerequisite: Algebra I)** *-Certified Entry-Level Python Prog. IBC*	1.0
Level 3	H3006	Computer Science II – Honors **(Prerequisite: Algebra I & Comp. Sci. I)** *Information Technology Specialist: JAVA IBC*	1.0
Level 4	H3027	Computer Science III – Honors **(Prerequisite: Algebra I & Comp. Sci. II Honors)**	1.0
	H8260	Practicum in STEM **(Prerequisite: Algebra I & Two STEM Career Cluster Credits.)**	2.0

Successful completion of 4 or more course credits in the Programming & Software Development program of study along with Algebra II, Chemistry, & Physics will fulfill requirements of the Science, Technology, Engineering, & Mathematics endorsement.

Program is only offered at the Science, Technology, Engineering and Mathematics (STEM) Academy located on the Legacy of Educational Excellence High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Work-Based and Expanded Learning Opportunities

- Join TSA
- Participate in a coding club at school
- Obtain a programming IBCs

Postsecondary Opportunities

Associates Degrees

- Computer Programming/Programmer General
- Computer Software Engineer
- Computer Science
- Certified Software Analyst

Bachelor's Degrees

- Management Information Systems, General
- Computer Software Engineer
- Computer Science
- Information Science/ Studies

Master's, Doctoral, and Professional Degrees

- Computer Software Engineer
- Computer Science
- Information Science/ Studies

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Software Developer, Systems Software	$103,334	2,985	25%
Software Developers, Application	$104,499	6,311	30%
Computer Programmers	$79,893	1,454	9%

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Manufacturing Career Cluster

The Manufacturing Career Cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering.

STEM - Robotics and Automation Technology

The Robotics and Automation Technology program of study focuses on the assembly, operation, maintenance, and repair of electromechanical equipment or devices. CTE learners may work in a variety of mechanical fields, gaining knowledge and experience in robotics, refinery and pipeline systems, deep ocean exploration, or hazardous waste removal. CTE concentrators may work in a variety of fields of engineering.

NEISD Course Sequence

	NEISD Course #	NEISD Course Name	CR.
Level 1	M3019	Principles of Applied Engineering* ** STEM Students make take in middle school.*	1.0
	H8250	Principles of Applied Engineering	1.0
Level 2	H8094	Robotics I **(Prerequisites: Prin. of Applied Engineering.)** *Machining CNC Mill Operations Level 1 IBC*	1.0
Level 3	H6768	Robotics II (Math Cr.) **(Prerequisites: Robotics I.)**	1.0
Level 4	H8273	Practicum in Manufacturing	2.0

Successful completion of 4 or more course credits in the Advanced Manufacturing & Machinery Mechanics program of study will fulfill requirements of the Business and Industry endorsement.

Program is only offered at the Science, Technology, Engineering and Mathematics (STEM) Academy located on the Legacy of Educational Excellence High School campus. Students must apply through the magnet application process prior to entry. Students who reside within or outside NEISD boundaries may apply.

Work-Based and Expanded Learning Opportunities

- Participate in FIRST (FRC) Competition robotics team
- Shadow a local manufacturing company
- Work at a local business or industry apprenticeship
- Earn one (1) IBC

Postsecondary Opportunities

Associates Degrees
- Electromechanical Engineering/Technology
- Certified Quality Technician
- Industrial Mechanics and Maintenance Technology

Bachelor's Degrees
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

Master's, Doctoral, and Professional Degrees
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Electro-Mechanical Assemblers	$30,160	951	9%
Electro-Mechanical Technicians	$56,555	127	9%
Industrial Machinery Mechanics	$49,816	3,788	27%

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