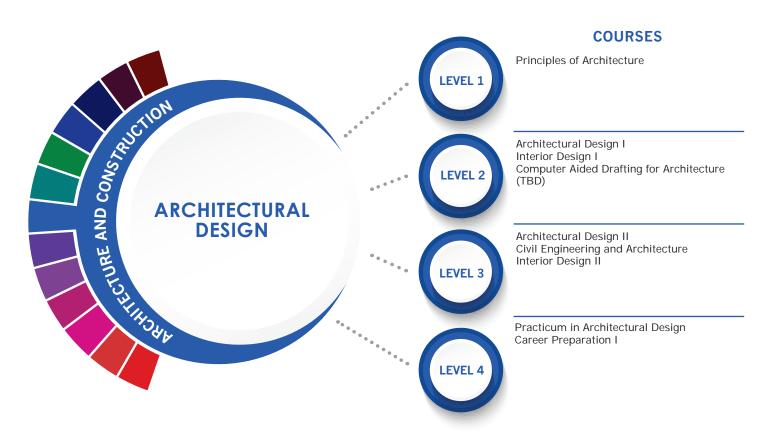


Local Implementation Considerations:

Students completing two or more courses for two or more credits within a program of study earn concentrator status for Perkins V federal accountability reporting.

Proposed Indicator: Students finishing three or more courses for four or more credits with one course from level 3 or 4 within a program of study earn completer status for federal accountability reporting.





HIGH SCHOOL/ INDUSTRY	CERTIFICATE/	ASSOCIATE'S	MASTER'S/ BACHELOR'S DOCTORAL			OCCUPATIONS	MEDIAN WAGE	I ANNUAL OPENINGS	% GROWTH
CERTIFICATION	LICENSE*	DEGREE	DEGREE	PROFESSIONAL DEGREE		Architects	\$77,04	3 808	16%
Autodesk Certified Professional or User in AutoCAD	Certified Photogrammetric Technologist	Architecture			Geographic Information Analysts and Surveyors	\$58,92	6 162	27%	
Autodesk Certified Professional or User in AutoCAD	Certified Development, Design & Construction	Interior	Design	Interior Architecture		Architectural/ Civil Drafters	\$50,17	. ,	9%
Civil 3D	Professional					Civil Engineers	\$89,96	0 2,394	12%
Autodesk Certified Professional or User in Autodesk Revit Architecture	National Council Certified Interior Designer	Civil	l Engineering, Gei	neral		Construction Managers	\$87,40	2 2,401	14%
Autodesk Certified Professional or User in Autodesk Revit	LEED AP Building	Geograph	ic Information Sc Cartography	cience and				ING AND EXP	
MEP Electrical	Design & Construction					Exploration Activit		areer Preparat btain a Core Cu	
Additional indus	Additional industry based certification information is available from the TEA CTE website.				interior designer, or civil engineer		rcivil N	NCCER certification in Construction Technology	
For more in	nore information on postsecondary options for this program of study, visit TXCTE.org.			0			ntern at an arch rm	nitecture	

The Architectural 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.



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.

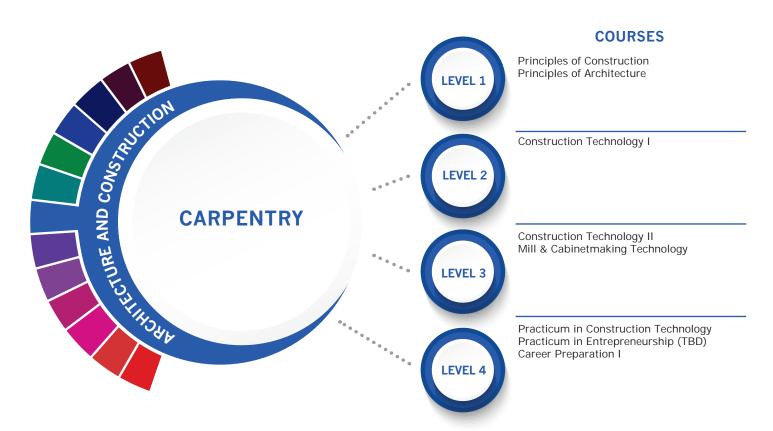
Successful completion of the Construction Design program of study will fulfill requirements of the Business and Industry Endorsement. Program of Study Draft for Public Comment June 2019



COURSE NAME	SERVICE ID	PREREQUISITES (PREQ) COREQUISITES (CREQ) RECOMMENDED PREREQUISITES (RPREQ) RECOMMENDED COREQUISITIES (CREQ)	GRADE
Principles of Architecture	13004210	None	9-12
Architectural Design I	13004600	PREQ: Algebra I and English I RPREQ:Geometry, Principles of Architecture, or Principles of Construction	10-12
Interior Design I	13004300	PREQ: Algebra I and English RPREQ: Principles of Architecture and Principles of Construction or Architectural Design	10-12
Computer Aided Drafting for Architecture (TBD)	TBD	TBD	TBD
Architectural Design II	13004700	PREQ: Architectural Design I or Advanced Interior Design and Geometry RPREQ: Principles of Architecture and Principles of Construction	11-12
Civil Engineering and Architecture	N103747	None	9-12
Interior Design II	13004400	PREQ: English II, Geometry, and Interior Design I	11-12
Practicum in Architectural Design	13004800 (2 credits) 13004805 (3 credits)	PREQ: Architectural Design II	12
Career Preparation I	12701300 (2 credits) 12701305 (3 credits)	None	11-12

FOR ADDITIONAL INFORMATION ON THE ARCHITECTURE AND CONSTRUCTION CAREER CLUSTER, PLEASE CONTACT:

Amanda Brantley | Amanda.Brantley@tea.texas.gov



HIGH SCHOOL/ INDUSTRY	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	000	UPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
CERTIFICATION	LICENSE*	DEGREE	DEGREE	DEGREE PROFESSIONAL DEGREE		rpenters	\$35,922	5,031	26%
NCCER Carpentry, Level 1 & 2	Certified Lead Carpenter	Carpentry/ Carpenter	Construction Science	Construction Management					
NCCER Commercial Carpenter	Certified Installer	Industrial Mechanics and Maintenance Technology			Es	Cost timators	\$63,939	2,239	21%
NCCER Core Curriculum	Certified Door Consultant								
NCCER Construction	Fluid Power Connector and				v			NG AND EXP	
Technology	Conductor				Exploration Activities: Career Preparat Shadow a carpenter or Obtain an NCCE				
	stry based certificat	ion information is a			millwr	ight .		tification in N /el 1 or Carpe	

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

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.



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Successful completion of the Carpentry program of study will fulfill requirements of the Business and Industry Endorsement. Program of Study Draft for Public Comment June 2019

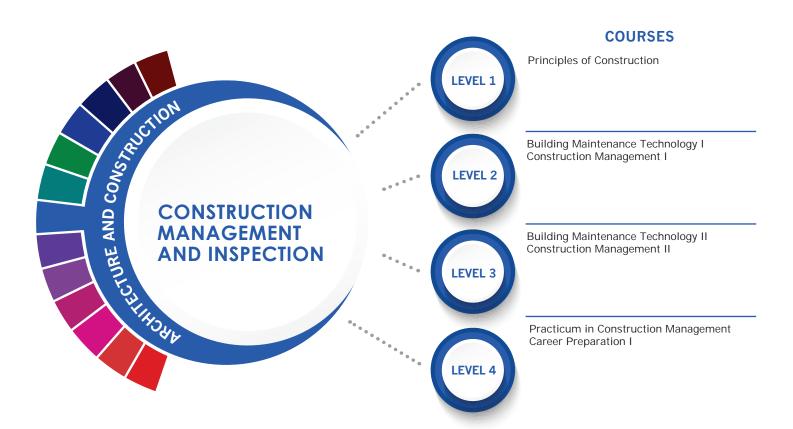


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COURSE NAME	SERVICE ID	PREREQUISITES (PREQ) COREQUISITES (CREQ) RECOMMENDED PREREQUISITES (RPREQ) RECOMMENDED COREQUISITIES (CREQ)	GRADE
Principles of Construction	130042200	None	9-12
Principles of Architecture	13004210	None	9-12
Construction Technology I	13005100	RPREQ: Principles of Construction or Principles of Architecture	10-12
Construction Technology II	13005200	PREQ: Construction Technology I	11-12
Mill & Cabinetmaking Technology	13005300	RPREQ: Principles of Architecture and Principles of Construction	10-12
Practicum in Construction Technology	13005250 (2 credits) 13006450 (3 credits)	PREQ: Construction Technology II, Building Maintenance Technology II, Electrical Technology II, Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology II, Plumbing Technology I, or Mill and Cabinetmaking Technology	12
Practicum in Entrepreneurship	TBD	TBD	TBD
Career Preparation I	12701300 (2 credits) 12701305 (3 credits)	None	11-12

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HIGH SCHOOL/ INDUSTRY	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
CERTIFICATION	LICENSE*	DEGREE	DEGREE	DEGREE PROFESSIONAL DEGREE		\$53,914	983	17%
NCCER Construction Technology	Code Enforcement Officer, Texas Department of Health Code Enforcement		n Engineering /Technician	Materials Engineering	and Building Inspectors			
NCCER Core Curriculum	Certified Cost Estimator/ Analyst	Business Adr	ministration and General	Management,	Cost Estimators	\$53,939	2,239	21%
OSHA 30 Hour Construction	Certified Professional Estimator	Me	chanical Enginee	ring				
NCCER Construction	Structural Masonry	Business/Com	merce, General	Manufacturing Engineering	WORK BASE LEAR		NG AND EXP ORTUNITIES	
Site Safety Technician	Special Inspector				Exploration Activit		er Preparatic in an NCCER	in:
Additional indus	Additional industry based certification information is available from the TEA CTE website.			inspector or cost estimator	Cons	truction Tech Curriculum,		
For more ir		oostsecondary o dy, visit TXCTE.	options for this program of org.			Level 1, or Electron Systems Technician Certification		nic

The Building Codes and Inspection program of study explores the occupations and educational opportunities associated with cost estimates for construction projects or services to aid management in bidding on or determining the price of products or services. This program of study may also include exploration into inspecting structures using engineering skills to determine structural soundness and compliance with specifications, building codes, and other regulations.



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.

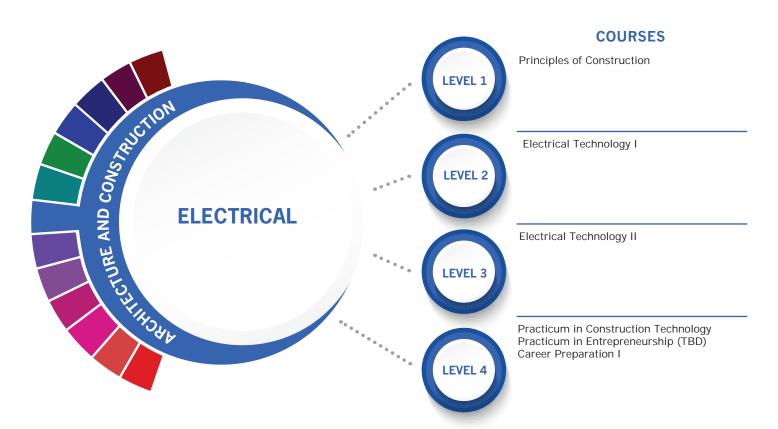
Successful completion of the Building Codes and Inspection program of study will fulfill requirements of the Business
and Industry Endorsement.Program of Study Draft for Public Comment June 2019



COURSE NAME	SERVICE ID	PREREQUISITES (PREQ) COREQUISITES (CREQ) RECOMMENDED PREREQUISITES (RPREQ) RECOMMENDED COREQUISITIES (CREQ)	GRADE
Principles of Construction	13004220	None	9-12
Building Maintenance Technology I	13005400	RPREQ: Principles of Architecture or Principles of Construction	10-12
Construction Management I	13004900	RPREQ: Algebra I, Geometry, and Principles of Construction	10-12
Building Maintenance Technology II	13005500	PREQ: Building Maintenance Technology I	11-12
Construction Management II	13005000	PREQ: Construction Management I	11-12
Practicum in Construction Management	13006200 (2 credits) 13006205 (3 credits)	PREQ: Construction Management II	12
Career Preparation I	12701300 (2 credits) 12701305 (3 credits)	None	11-12

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HIGH SCHOOL/ INDUSTRY	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
CERTIFICATION	LICENSE*	DEGREE	DEGREE	PROFESSIONAL DEGREE	Electrical Linemen	\$64,937	309	9%
NCCER Electrical, Level 1 & 2	Electrical Plans Examiner	Electrician	Construction Science	Construction Management	Electricians	\$44,013	8,460	21%
NCCER Electronic	Certified Electrical	Communications Systems Installation and			Electrical and Electronics Installers	\$58,178	195	14%
Technician, Level 1 & 2	Inspector - Master	Repair Technology			Security and Fire Alarm Installers	\$43,638	1,112	22%
Electrical Apprenticeship Certificate, Level 1	Fiber Optics Technician - Outside Plant				Telecommunication Line Installers and Repairers	\$49,150	1,228	10%
NCCER Commercial Electrician	Certification in Fire Alarm				WORK BASE LEAR		IG AND EXP ORTUNITIES	
Licotholdh	Systems - Level 1				Exploration Activities: Career Preparation Shadow an electrician or Obtain an NCCER			
Additional indus	Additional industry based certification information is available from the TEA CTE website.				fiber optics line installer ce		tification in Electrical	
For more information on postsecondary options for this program of				Level 1 or Electror Systems Technicia				

study, visit TXCTE.org.

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.



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.

Successful completion of the Electrical Program of Study will fulfill requirements of a Business and Industry Endorsement. Program of Study Draft for Public Comment June 2019

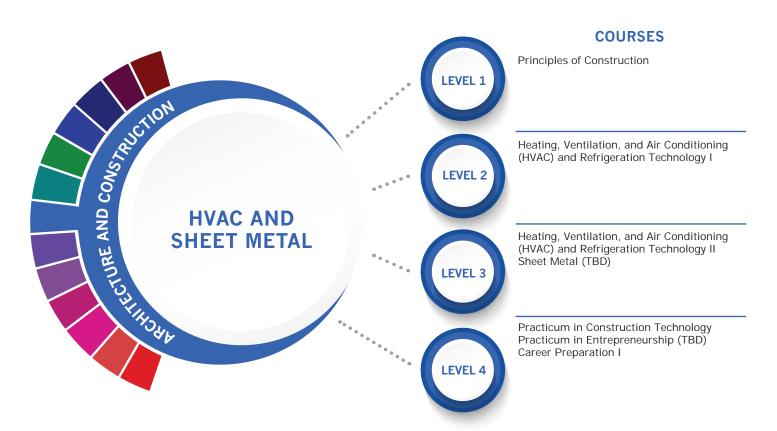


Level 1

COURSE NAME	SERVICE ID	PREREQUISITES (PREQ) COREQUISITES (CREQ) RECOMMENDED PREREQUISITES (RPREQ) RECOMMENDED COREQUISITIES (CREQ)	GRADE
Principles of Construction	13004220	None	9-12
Electrical Technology I	13005600	RPREQ: Principles of Architecture or Principles of Construction	10-12
Electrical Technology II	13005700	PREQ: Electrical Technology I RPREQ: Principles of Architecture or Principles of Construction	11-12
Practicum in Construction Technology	13005250 (2 credits) 13006450 (3 credits)	PREQ: Construction Technology II; Building Maintenance Technology II; Electrical Technology II; Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology II; Plumbing Technology I; or Mill and Cabinetmaking Technology	12
Practicum in Entrepreneurship	TBD	TBD	TBD
Career Preparation I	12701300 (2 credits) 12701305 (3 credits)	None	11-12

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HIGH SCHOOL/ INDUSTRY	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
CERTIFICATION	LICENSE*	DEGREE	DEGREE	PROFESSIONAL DEGREE	Heating, Air Conditioning, and Refrigeration	\$41,808	3,356	26%
Refrigerant Handling (EPA	Residential HVAC Design	Business Adr	Business Administration and Management, General		Mechanics			
608)	for Quality Installation				Sheet Metal Workers	\$37,419	1,479	17%
OSHA 30 Hour Construction	Certified Cost Technician	Mee	chanical Enginee	ring				
					Cost Estimators	\$63,939	2,239	21%
NCCER HVAC, Level 1	Precision Sheet Metal Operator	Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/	Construction Engineering Technology/	Construction Engineering	Estimators			
	Certification	Technician	Technician					
NCCER Sheet Metal, Level 1	Certified Ventilation	Busine	ss/Commerce, G	Seneral	WORK BASE LEAR		NG AND EXP PORTUNITIES	
	System Inspector				Exploration Activi Shadow an HVAC		areer Prepara btain an NCCE	
Additional indus	Additional industry based certification information is available from the TEA CTE website.				or cost estimator		certification in HVAC	
For more in		oostsecondary c dy, visit TXCTE.	ptions for this program of			E T	ectrical Level 1, ectronic Systems echnician Level 1, or neet Metal Level 1	

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 also 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.



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.

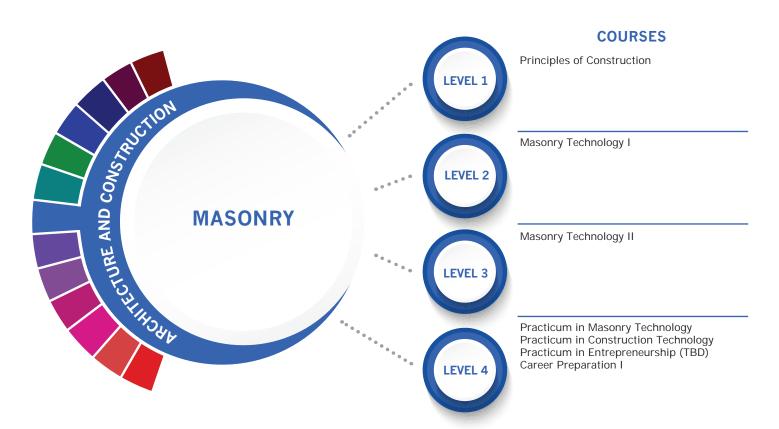
Successful completion of the HVAC and Sheet Metal program of study will fulfill requirements of the Business and Industry Endorsement. Program of Study Draft for Public Comment June 2019



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COURSE NAME	SERVICE ID	PREREQUISITES (PREQ) COREQUISITES (CREQ) RECOMMENDED PREREQUISITES (RPREQ) RECOMMENDED COREQUISITIES (CREQ)	GRADE
Principles of Construction	13004220	None	9-12
Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology I	13005800	RPREQ: Principles or Architecture, Principles of Construction, or Construction Technology I	10-12
Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology II	13005900	PREQ: Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology I RPREQ: Principles of Architecture or Principles of Construction	11-12
Sheetmeal	TBD	TBD	TBD
Practicum in Construction Technology	13005250 (2 credits) 13006450 (3 credits)	PREQ: Construction Technology II; Building Maintenance Technology II; Electrical Technology II; Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology II; Plumbing Technology I; or Mill and Cabinetmaking Technology	12
Practicum in Entrepreneurship (TBD)	TBD	TBD	11-12
Career Preparation I	12701300 (2 credits) 12701305 (3 credits)	None	11-12

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HIGH SCHOOL/ INDUSTRY	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
CERTIFICATION	LICENSE*	DEGREE	DEGREE	PROFESSIONAL DEGREE	Brickmasons and Blockmasons	\$44,013	605	47%
NCCER Masonry, Level 1 & 2	Structural Masonry Special	Mason/ Masonry	Construction Science	Construction Management				
1 0 2	Inspector				Cement Masons and	\$32,739	2,883	12%
NCCER Core Curriculum	Structural Steel and Bolting Special				Concrete Finishers			
	Inspector				Cost Estimators	\$63,939	2,239	21%
NCCER Construction Technology, Level 1	Masonry Contractor							
NCCER Weatherization,	Masonry Field Testing				WORK BASE LEAR		NG AND EXP ORTUNITIES	
Level 1	Technician				Exploration Activi Job shadow a		reer Preparat tain an NCCE	
Additional indus	try based certificat	ion information is a	vailable from the T	EA CTE website.	brickmason, stone or ironworker	emason, Cer	tification in N el 1, and/or (/lasonry

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

The Masonry program of study explores the occupations and educational opportunities related to laying and binding materials, such as brick, structural tile, concrete block, and other types of mortar and substances to construct or repair walls and other structures. This program of study may also include exploration into raising and uniting iron or steel to form completed structures or structural frameworks, and building structures using stone.



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.

Successful completion of the Masonry program of study will fulfill requirements of the Business and Industry
Program of Study Draft for Public Comment June 2019



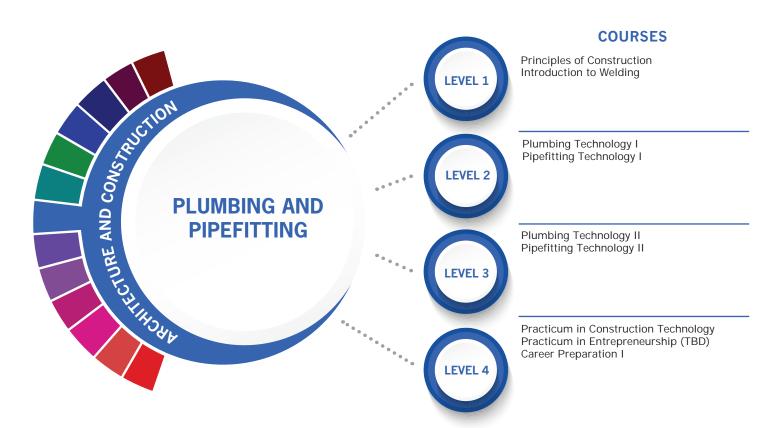
Curriculum, Construction

or Technology Level 1

COURSE NAME	SERVICE ID	PREREQUISITES (PREQ) COREQUISITES (CREQ) RECOMMENDED PREREQUISITES (RPREQ) RECOMMENDED COREQUISITIES (CREQ)	GRADE
Principles of Construction	13004220	None	9-12
Masonry Technology I	13006300	RPREQ: Principles of Construction	10-12
Masonry Technology II	13006400	PREQ: Masonry Technology I	11-12
Practicum in Masonry Technology	13006450 (2 credits) 13006455 (3 credits)	PREQ: Masonry Technology II	12
Practicum in Construction Technology	13005250 (2 credits) 13006450 (3 credits)	PREREQ: Masonry Technology II	11-12
Practicum in Entrepreneurship	TBD	TBD	11-12
Career Preparation I	12701300 (2 credits) 12701305 (3 credits)	None	11-12

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HIGH SCHOOL/ INDUSTRY	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
CERTIFICATION	LICENSE*	DEGREE	DEGREE	PROFESSIONAL DEGREE	Mechanics, Installers, and	\$63,710	4,243	17%
NCCER Pipefitting, Level 1	Commercial Plumbing Inspector	Plumbing Technology/ Plumber	Construction Science	Construction Management	Repairers Plumbers	\$44,928	5,765	23%
NCCER Plumbing, Level 1 & 2	Journey Level Pipefitter- Steamfitter	Electrical and Power Transmission Installation/ Installer, General	Operations Management and Supervision		Pipefitters Steamfitters	\$44,928 \$44,928	5,765 5,765	23% 23%
NCCER Construction Technology	Plumbing Plans Inspector	Pipefitting/ Pipefitter and Sprinkler Fitter						
Tradesman Plumber - Limited License	Certified Service Manager	High Performance and Custom Engine Technician/ Mechanic			WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES			
Additional industry based certification information is available from the TEA CTE website.					Exploration Activities:Career Preparation:Job shadow a plumber,Obtain a Core Curriculumpipefitter, or steamfitterNCCER certification inPipefitting Level 1 orN			

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

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.



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Successful completion of the Plumbing and Pipefitting Program of Study will fulfill requirements of a Business and
Industry Endorsement.Program of Study Draft for Public Comment June 2019



Plumbing Level 1

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COURSE NAME	SERVICE ID	PREREQUISITES (PREQ) COREQUISITES (CREQ) RECOMMENDED PREREQUISITES (RPREQ) RECOMMENDED COREQUISITIES (CREQ)	GRADE
Principles of Construction	13004220	None	9-12
Introduction to Welding	13032250	RPREQ or CPREQ: Algebra I	9-12
Plumbing Technology I	13006000	RPREQ: Principles of Architecture Principles of Construction, or Construction Technology I	10-12
Pipefitting Technology I	N1300425	PREQ: Algebra I and Geometry RPREQ: National Center for Construction Education and Research (NCCER) Core, Introduction to Manufacturing, Principles of Construction, or Construction Technology I	11-12
Plumbing Technology II	13005900	PREREQ: HVAC and Refrigeration Technology I	11-12
Pipefitting Technology II	N13005900	RPREQ: Pipefitting Technology I	11-12
Practicum in Construction Technology	13005250 (2 credits) 13006450 (3 credits)	PREQ: Construction Technology II; Building Maintenance Technology II; Electrical Technology II; Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology II; Plumbing Technology I; or Mill and Cabinetmaking Technology	12
Practicum in Entrepreneurship	TBD	TBD	TBD
Career Preparation I	12701300 (2 credits) 12701305 (3 credits)	None	11-12

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