

## Architecture and Construction CIP Code Eligibility

Pathway	Program	CIP Code	Program Details	Assessments	SOC* Code	SOC* Job Title
Design/Pre-Construction	Architectural Technology / Technician	040901	A program that prepares individuals to assist architects in developing plans and related documentation and in performing architectural office services. Includes instruction in architectural drafting, computer-assisted drafting and design, construction methods and materials, environmental systems, building codes and standards, structural principles, cost estimation, planning documentation, visual communication skills, display production, and architectural office management.	- Architectural Drafting - NOCTI - Architecture Apprentice Drafter-ADDA	17-3011	Architectural and Civil Drafters
	Architectural Drafting and Architectural CAD/CADD	151303	A program that prepares individuals to apply technical knowledge and skills to develop working drawings and electronic simulations for architectural and related construction projects. Includes instruction in basic construction and structural design, architectural rendering, architectural-aided drafting (CAD), layout and designs, architectural blueprint interpretation, building materials, and basic structural wiring diagramming.	- Architectural Drafting - NOCTI - Architecture Apprentice Drafter-ADDA	17-3011	Architectural and Civil Drafters
	Civil Drafting and Civil Engineering CAD/CADD.	151304	A program that prepares individuals to apply technical knowledge and skills to develop working drawing and electronic simulations in support of civil engineers, geological engineers, and related professionals. Includes instruction in basic civil engineering principles, geological and seismographic mapping, machine drafting, computer-aided drafting (CAD), pipe drafting, survey interpretation, and blueprint reading.		17-3011	Architectural and Civil Drafters
	Electrical/Electronics Drafting and Electrical/Electronics CAD/CADD.	151305	A program that prepares individuals to apply technical knowledge and skills to develop working schematics and representations in support of electrical/electronic engineers, computer engineers, and related professionals. Includes instruction in basic electronics, electrical systems and computer layouts; electrode-mechanical drafting; manufacturing circuitry; computer-aided drafting (CAD); and electrical systems specification interpretation			
	Mechanical Drafting and Mechanical Drafting CAD/CADD.	151306	A program that prepares individuals to apply technical knowledge and skills to develop working drawings and electronic simulations in support of mechanical and industrial engineers, and related professionals. Includes instruction in manufacturing materials and processes, mechanical drafting, electrode-mechanical drafting, basic metallurgy, geometric dimensioning and tolerancing, blueprint reading, and technical communication.			
Construction	Electrician	46.0302	A program that prepares individuals to apply technical knowledge and skills to install, operate, maintain, and repair electric apparatus and systems such as residential, commercial, and industrial electric-power wiring; and DC and AC motors, controls, and electrical distribution panels. Includes instruction in the principles of electronics and electrical systems, wiring, power transmission, safety, industrial and household appliances, job estimation, electrical testing and inspection, and applicable codes and standards.	- Electrical Construction Technology - NOCTI  - NCCER: Electrical Level One	47-1011  47-2111	First-Line Supervisors of Construction Trades and Extraction Workers  Electricians
	Building / Property Maintenance	460401	A program that prepares individuals to apply technical knowledge and skills to keep a building functioning, and to service a variety of structures including commercial and industrial buildings and mobile homes. Includes instruction in the basic maintenance and repair skills required to service building systems, such as air conditioning, heating, plumbing, electrical, major appliances, and other mechanical systems.	- Building Trades Maintenance or Maintenance Operations Pathway Assessment - NOCTI	47-1011	First-Line Supervisors of Construction Trades and Extraction Workers
	Plumbing Technology / Plumber	460503	A program that prepares individuals to practice as licensed plumbers by applying technical knowledge and skills to lay out, assemble, install, and maintain piping fixtures and systems for steam, natural gas, oil, hot water, heating, cooling, drainage, lubricating, sprinkling, and industrial processing systems in home and business environments. Includes instruction in source determination, water distribution, waster removal, pressure adjustment, basic physics, technical mathematics, blueprint reading, pipe installation, pumps, welding and soldering, plumbing inspection, and applicable codes and standards.	Plumbing - NOCTI	47-1011	First-Line Supervisors of Construction Trades and Extraction
					47-2152	Plumbers, Pipefitters, and Steamfitters
					47-4071	Septic Tank Servicers and Sewer Pipe Cleaners
	Building Construction Technology	460415	A program that prepares individuals to apply technical knowledge and skills to residential and commercial building construction and remodeling. Includes instruction in construction equipment and safety; site preparation and layout; construction estimating; blueprint reading; building codes; framing; masonry; heating, ventilation, and air conditioning; electrical and mechanical systems; interior and exterior finishing; and plumbing.	- Building Construction Occupations - NOCTI  NCCER: - Carpentry Level One - Construction Technologist - Core: Introductory Craft Skills	17-3022	Civil Engineering Technicians
					47-1011	First-Line Supervisors of Construction Trades and Extraction Workers
	Mason / Masonry	460101	A program that prepares individuals to apply technical knowledge and skills in the laying and/or setting of exterior brick, concrete block, hard tile, marble and related materials, using trowels, levels, hammers, chisels, and other hand tools. Includes instruction in technical mathematics, blueprint reading, structural masonry, decorative masonry, foundations, reinforcement, mortar preparation, cutting and finishing, and applicable codes and standards.	- Construction Masonry - block or brick - NOCTI  - NCCER: Masonry Level One	47-1011	First-Line Supervisors of Construction Trades and Extraction Workers
					47-2021	Brickmasons and Blockmasons
					47-2022	Stonemasons
47-2044					Tile and Marble Setters	

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<b>Construction</b>	Carpentry / Carpenter	46.0201	A program that prepares individuals to apply technical knowledge and skills to lay out, cut, fabricate, erect, install, and repair wooden structures and fixtures, using hand and power tools. Includes instruction in technical mathematics, framing, construction materials and selection, job estimating, blueprint reading, foundations and roughing-in, finish carpentry techniques, and applicable codes and standards.	- Carpentry - NOCTI - NCCER: Carpenter Level One	47-1011 47-2031	First-Line Supervisors of Construction Trades and Extraction Carpenters	
	Electrician	460302	A program that prepares individuals to apply technical knowledge and skills to install, operate, maintain, and repair electric apparatus and systems such as residential, commercial, and industrial electric-power wiring; and DC and AC motors, controls, and electrical distribution panels. Includes instruction in the principles of electronics and electrical systems, wiring, power transmission, safety, industrial and household appliances, job estimation, electrical testing and inspection, and applicable codes and standards.	- Electrical Construction Technology - NOCTI - NCCER: Electrical Level One	47-1011 47-2111	First-Line Supervisors of Construction Trades and Extraction Electricians	
	Plumbing Technology / Plumber	460503	A program that prepares individuals to practice as licensed plumbers by applying technical knowledge and skills to lay out, assemble, install, and maintain piping fixtures and systems for steam, natural gas, oil, hot water, heating, cooling, drainage, lubricating, sprinkling, and industrial processing systems in home and business environments. Includes instruction in source determination, water distribution, waster removal, pressure adjustment, basic physics, technical mathematics, blueprint reading, pipe installation, pumps, welding and soldering, plumbing inspection, and applicable codes and standards.	- Plumbing - NOCTI	47-1011 47-2152 47-4071	First-Line Supervisors of Construction Trades and Extraction Plumbers, Pipefitters, and Steamfitters Septic Tank Servicers and Sewer Pipe Cleaners	
	<b>Maintenance Operations</b>	Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technician (HAC, HACR, HVAC, HVACR)	470201	A program that prepares individuals to apply technical knowledge and skills to repair, install, service and maintain the operating condition of heating, air conditioning, and refrigeration systems. Includes instruction in diagnostic techniques, the use of testing equipment and the principles of mechanics, electricity, and electronics as they relate to the repair of heating, air conditioning and refrigeration systems.	- HVAC or HVACR, NOCTI - HVAC Excellence: Residential Air Conditioning - NCCER: HVAC	49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers

### Previously Used CIP Codes No Longer in Architecture and Construction Career Cluster

Pathway	Program	CIP	Description	Eligible
<b>Design/Pre-Construction</b>	Drafting and Design Technology / Technician, General	151301	A program that prepares individuals to generally apply technical skills to create working drawings and computer simulations for a variety of applications. Includes instruction in specification interpretation, dimensioning techniques, drafting calculations, material estimation, technical communications, computer applications, and interpersonal communications.	<b>CIP Codes were realigned to the Manufacturing Cluster</b>
	CAD/CADD Drafting and/or Design Technology / Technician	151302	A program that prepares individuals to apply technical skills and advanced computer software and hardware to the creation of graphic representations and simulations in support of engineering projects. Includes instruction in engineering graphics, two-dimensional and three-dimensional engineering design, solids modeling, engineering animation, computer-aided drafting (CAD), computer-aided design (CADD), and auto-CAD techniques.	
<b>Construction</b>	Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology / Technician	150501	A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using air conditioning, refrigeration, ventilation, and heating systems. Includes instruction in principles of heating and cooling technology, design and operational testing, inspection and maintenance procedures, installation and operation procedures, and report preparation.	
	Woodworking General	480701	A program that generally prepares individuals to apply technical knowledge and skills to lay out and shape stock; assemble wooden articles or subassemblies; mark, bind, saw, carve, and sand wooden products; repair wooden articles, and use a variety of hand and power tools. See also: 46.0201) Carpentry/Carpenter.	