

Female Nontraditional Careers By Career Cluster

Cluster Title	Pathway Title	CIP Code	CIP Title
Agriculture, Food and Natural Resource Career Cluster			
Food Products and Processing Systems Pathway			
		011002	Food Technology and Processing
		011001	Food Science
		010401	Agricultural and Food Products Processing
		010199	Agricultural Business and Management, Other
		010105	Agricultural/Farm Supplies Retailing and Wholesaling
Plant Systems Pathway			
		019999	Agriculture, Agriculture Operations, & Related Sciences, Other
		011203	Soil Microbiology
		011202	Soil Chemistry and Physics
		011201	Soil Science and Agronomy, General
		011199	Plant Sciences, Other
		011106	Range Science and Management
		011105	Plant Protection and Integrated Pest Management
		011104	Agricultural and Horticultural Plant Breeding
		011103	Horticultural Science
		011102	Agronomy and Crop Science
		011101	Plant Sciences, General
		010699	Applied Horticulture/Horticultural Business Services, Other
		010607	Turf and Turfgrass Management
		010606	Plant Nursery Operations and Management
		010605	Landscaping and Groundskeeping
		010604	Greenhouse Operations and Management
		010603	Ornamental Horticulture
		010601	Applied Horticulture/Horticultural Operations, General
		010399	Agricultural Production Operations, Other
		010304	Crop Production
		010303	Aquaculture
		010301	Agricultural Production Operations, General
		010104	Farm/Farm and Ranch Management
		010102	Agribusiness/Agricultural Business Operations
		010101	Agricultural Business and Management, General
		010000	Agriculture, General
Animal Systems Pathway			
		010999	Animal Sciences, Other
		010907	Poultry Science
		010906	Livestock Management
		010905	Dairy Science
		010904	Animal Nutrition
		010903	Animal Health
		010902	Agricultural Animal Breeding
		010901	Animal Sciences, General
		010307	Horse Husbandry/Equine Science and Management

Cluster Title	Pathway Title	CIP Code	CIP Title
		010306	Dairy Husbandry and Production
		010302	Animal/Livestock Husbandry and Production
	Power Structure and Technical Systems Pathway		
		010299	Agricultural Mechanization, Other
		010205	Agricultural Mechanics & Equipment/Machine Technology
		010204	Agricultural Power Machinery Operation
		010201	Agricultural Mechanization, General
	Natural Resources Systems Pathway		
		490304	Diver, Professional and Instructor
		490303	Commercial Fishing
		150999	Mining and Petroleum Technologies/Technicians, Other
		150903	Petroleum Technology/Technician
		150901	Mining Technology/Technician
		039999	Natural Resources and Conservation, Other
		030601	Wildlife and Wildlands Science and Management
		030599	Forestry, Other
		030510	Forest Resources Production and Management
		030509	Wood Science and Wood Products/Pulp and Paper Technology
		030508	Urban Forestry
		030506	Forest Management/Forest Resources Management
		030502	Forest Sciences and Biology
		030501	Forestry, General
		030301	Fishing and Fisheries Sciences and Management
		030299	Natural Resources Management and Policy, Other
		030206	Land Use Planning and Management/Development
		030205	Water, Wetlands, and Marine Resources Management
		030204	Natural Resource Economics
		030201	Natural Resources Management and Policy
		030104	Environmental Science
		030103	Environmental Studies
		030101	Natural Resources/Conservation, General
	Environmental Service Systems Pathway		
		150599	Environmental Control Technologies/Technicians, Other
		150508	Hazardous Materials Management & Waste Technology/Technician
		150507	Environmental Engineering Technology/Environmental Technology
		150506	Water Quality & Wastewater Treatment Management & Recycling Technology/Technician
	Agribusiness Systems Pathway		
		010802	Agricultural Communication/Journalism
		010701	International Agriculture
Architecture and Construction Career Cluster			
	Design/Pre-Construction Pathway		
		151399	Drafting/Design Engineering Technologies/Technicians, Other
		151306	Mechanical Drafting and Mechanical Drafting CAD/CADD
		151305	Electrical/Electronics Drafting & Electrical/Electronics CAD/CADD
		151304	Civil Drafting and Civil Engineering CAD/CADD
		151303	Architectural Drafting and Architectural CAD/CADD

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		151302	CAD/CADD Drafting and/or Design Technology/Technician
		151301	Drafting and Design Technology/Technician, General
		151102	Surveying Technology/Surveying
		150201	Civil Engineering Technology/Technician
		150101	Architectural Engineering Technology/Technician
		143801	Surveying Engineering
		049999	Architecture and Related Services, Other
		040901	Architectural Technology/Technician
		040801	Architectural History and Criticism, General
		040601	Landscape Architecture (BS, BSLA, BLA, MSLA, MLA, PhD)
		040501	Interior Architecture
		040401	Environmental Design/Architecture
		040201	Architecture (BArch, BA/BS, MArch, MA/MS, PhD)
Construction Pathway			
		522001	Construction Management
		490206	Mobil Crane Operation/Operator
		490202	Construction/Heavy Equipment/Earthmoving Equipment Operation
		480801	Boilermaking/Boilermaker
		480599	Precision Metal Working, Other
		480509	Ironworking/Ironworker
		469999	Construction Trades, Other
		460599	Plumbing and Related Water Supply Services, Other
		460505	Blasting/Blaster
		460504	Well Drilling/Driller
		460503	Plumbing Technology/Plumber
		460502	Pipefitting/Pipefitter and Sprinkler Fitter
		460499	Building/Construction Finishing, Management, & Inspection, Other
		460412	Building/Construction Site Management/Manager
		460411	Metal Building Assembly/Assembler
		460410	Roofer
		460408	Painting/Painter and Wall Coverer
		460406	Glazier
		460404	Drywall Installation/Drywaller
		460403	Building/Home/Construction Inspection/Inspector
		460402	Concrete Finishing/Concrete Finisher
		460401	Building/Property Maintenance and Management
		460399	Electrical and Power Transmission Installers, Other
		460303	Lineworker
		460302	Electrician
		460301	Electrical & Power Transmission Installation/Installer, General
		460201	Carpentry/Carpenter
		460101	Mason/Masonry
		151001	Construction Engineering Technology/Technician
		150505	Solar Energy Technology/Technician
		150503	Energy Management and Systems Technology/Technician
		150501	Heating, Air Conditioning & Refrigeration Technology/Technician (ACH/ACR/ACHR/H

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Maintenance/Operations Pathway			
		470302	Heavy Equipment Maintenance Technology/Technician
		470201	Heating, Air Conditioning, Ventilation & Refrigeration Maintenance Technology/Technician
		470199	Electrical/Electronics Maintenance & Repair Technology, Other
		470110	Security System Installation, Repair, & Inspection Technology/Technician
Arts, Audio/Video Technology and Communications Career Cluster			
Audio and Video Technology and Film Pathway			
		100299	Audiovisual Communications Technologies/Technicians, Other
Printing Technology Pathway			
		100399	Graphic Communications, Other
		100307	Printing Press Operator
		100302	Printing Management
Visual Arts Pathway			
		500409	Graphic Design
		100201	Photographic and Film/Video Technology/Technician & Assistant
Performing Arts Pathway			
		500602	Cinematography and Film/Video Production
Journalism and Broadcasting Pathway			
		100203	Recording Arts Technology/Technician
		100202	Radio and Television Broadcasting Technology/Technician
		090701	Radio and Television
		090404	Photojournalism
Telecommunications Pathway			
		470103	Communications Systems Installation and Repair Technology
		100105	Communications Technology/Technician
Business, Management and Administration Career Cluster			
Management Pathway			
		521101	International Business/Trade/Commerce
		520205	Operations Management and Supervision
		520203	Logistics and Materials Management
		520202	Purchasing, Procurement/Acquisitions & Contracts Management
		520201	Business Administration and Management, General
		520101	Business/Commerce, General
Government and Public Administration Career Cluster			
Governance (Legislators and general government executives and staff) Pathway			
		440501	Public Policy Analysis
		440401	Public Administration
Planning Pathway			
		040301	City/Urban, Community and Regional Planning
Health Science Career Cluster			
Therapeutic Services Pathway			
		600199	Dental Residency Program, Other
		600108	Prosthodontics Specialty - (Residency Program)
		600107	Periodontics Specialty - (Residency Program)
		600106	Pedodontics Specialty - (Residency Program)

Cluster Title	Pathway Title	CIP Code	CIP Title
		600105	Orthodontics Specialty - (Residency Program)
		600104	Oral Pathology Specialty - (Residency Program)
		600103	Endodontics Speciality - (Residency Program)
		600102	Dental Public Health Specialty - (Residency Program)
		600101	Dental/Oral Surgery Specialty - (Residency Program)
		510599	Advanced/Graduate Dentistry and Oral Sciences, Other
		510511	Prosthodontics/Prosthodontology (Cert, MS, PhD)
		510510	Periodontics/Periodontology (Cert, MS, PhD)
		510509	Pediatric Dentistry/Pedodontics (Cert, MS, PhD)
		510508	Orthodontics/Orthodontology (Cert, MS, PhD)
		510507	Oral/Maxillofacial Surgery (Cert, MS, PhD)
		510506	Endodontics/Endodontology (Cert, MS, PhD)
		510505	Dental Materials (MS, PhD)
		510504	Dental Public Health & Education (Cert, MS/MPH, PhD/DPH)
		510503	Oral Biology and Oral Pathology (MS, PhD)
		510502	Advanced General Dentistry (Cert, MS, PhD)
		510501	Dental Clinical Sciences, General (MS, PhD)
		510401	Dentistry (DDS, DMD)
		510101	Chiropractic (DC)
Health Informatics Pathway			
		512799	Medical Illustration and Informatics, Other
		512706	Medical Informatics
		512312	Assistive/Augmentative Technology & Rehabilitation Engineering
		512205	Health/Medical Physics
Hospitality and Tourism Career Cluster			
Restaurants and Food/Beverage Services Pathway			
		129999	Personal and Culinary Services, Other
		120505	Food Preparation/Professional Cooking/Kitchen Assistant
		120503	Culinary Arts/Chef Training
		120500	Cooking and Related Culinary Arts, General
Human Service Career Cluster			
Counseling and Mental Health Services Pathway			
		511506	Clinical Pastoral Counseling/Patient Counseling
		399999	Theological Studies and Religious Vocations, Other
		390799	Pastoral Counseling and Specialized Ministries, Other
		390702	Youth Ministry New
		390701	Pastoral Studies/Counseling
		390699	Theological and ministerial Studies, Other
		390605	Rabbinical Studies
		390604	Pre-Theology/Pre-Ministerial Studies
		390602	Divinity/Ministry BD, Mdiv.
		390601	Theology/Theological Studies
Family and Community Services Pathway			
		449999	Public Administration and Social Service Professions, Other
Personal Care Services Pathway			
		120402	Barbering/Barber

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		120303	Mortuary Science and Embalming/Embalmer
		120302	Funeral Direction/Service
		120301	Funeral Service and Mortuary Science, General
Information Technology Career Cluster			
Network Systems Pathway			
		111002	System, Networking, and LAN/WAN Management/Manager
		110901	Computer Systems Networking and Telecommunications
		110701	Computer Science
Information Support Services Pathway			
		119999	Computer and Information Sciences & Support Services, Other
		111001	System Administration/Administrator
		110401	Information Science/Studies
		110301	Data Processing and Data Processing Technology/Technician
		110103	Information Technology
		110101	Computer and Information Sciences, General
Interactive Media Pathway			
		111004	Web/Multimedia Management and Webmaster
		110102	Artificial Intelligence and Robotics
Programming and Software Development Pathway			
		140999	Computer Engineering, Other
		140903	Computer Software Engineering
		140901	Computer Engineering, General
		111003	Computer and Information Systems Security
		110501	Computer Systems Analysis/Analyst
		110201	Computer Programming/Programmer, General
Law, Public Safety, Corrections and Security Career Cluster			
Correction Services Pathway			
		430102	Corrections
Emergency and Fire Management Services Pathway			
		430299	Fire Protection, Other
		430203	Fire Science/Firefighting
		430202	Fire Services Administration
		430201	Fire Protection and Safety Technology/Technician
Security and Protective Services Pathway			
		439999	Security and Protective Services, Other
		430112	Securities Services Administration/Management
		430109	Security and Loss Prevention Services
Law Enforcement Services Pathway			
		430111	Criminalistics and Criminal Science
		430107	Criminal Justice/Police Science
		430104	Criminal Justice/Safety Studies
		430103	Criminal Justice/Law Enforcement Administration
Manufacturing Career Cluster			
Production Pathway			
		480799	Woodworking, Other

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		480703	Cabinetmaking and Millwork/Millwright
		480702	Furniture Design and Manufacturing
		480701	Woodworking, General
		480508	Welding Technology/Welder
		480507	Tool and Die Technology/Technician
		480506	Sheet Metal Technology/Sheetworking
		480503	Machine Shop Technology/Assistant
		480501	Machine Tool Technology/Machinist
		480399	Leatherworking and Upholstery, Other
		480304	Shoe, Boot and Leather Repair
		480303	Upholstery/Upholsterer
Manufacturing Production Process Development Pathway			
		410301	Chemical Technology/Technician
		150404	Instrumentation Technology/Technician
		150304	Laser and Optical Technology/Technician
Maintenance, Installation and Repair Pathway			
		470499	Precision Systems Maintenance and Repair Technologies, Other
		470409	Parts & Warehousing Operations & Maintenance Technology/Technician
		470408	Watchmaking and Jewelmaking
		470404	Musical Instrument Fabrication and Repair
		470403	Locksmithing and Safe Repair
		470402	Gunsmithing/Gunsmith
		470399	Heavy/Industrial Equipment Maintenance Technologies, Other
		470303	Industrial Mechanics and Maintenance Technology
		470106	Appliance Installation and Repair Technology/Technician
		470105	Industrial Electronics Technology/Technician
		470104	Computer Installation and Repair Technology/Technician
		470102	Business Machine Repair
		470101	Electrical/Electronics Equipment Installation & Repair, General
		410205	Nuclear/Nuclear Power Technology/Technician
		190605	Home Furnishings and Equipment Installers
		151299	Computer Engineering Technologies/Technicians, Other
		151202	Computer Technology/Computer Systems Technology
		151201	Computer Engineering Technology/Technician
		151103	Hydraulics and Fluid Power Technology/Technician
		150899	Mechanical Engineering Related Technologies/Technicians, Other
		150805	Mechanical Engineering/Mechanical Technology/Technician
		150699	Industrial Production Technologies/Technicians, Other
		150613	Manufacturing Technology/Technician
		150612	Industrial Technology/Technician
		150611	Metallurgical Technology/Technician
		150607	Plastics Engineering Technology/Technician
		150499	Electromechanical & Instrumentation and Maintenance Technologies/Technicians, Other
		150401	Biomedical Technology/Technician
		150399	Electrical & Electronic Engineering Technologies/Technicians, Other
		150305	Telecommunications Technology/Technician

Cluster Title	Pathway Title	CIP Code	CIP Title
		150303	Electrical, Electronic & Communications Engineering Technology/Technician

Marketing Sales and Service Career Cluster

Professional Sales and Marketing Pathway

		521804	Selling Skills and Sales Operations
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Science, Technology, Engineering and Mathematics Career Cluster

Engineering and Technology Pathway

		159999	Engineering Technologies/Technicians, Other
		151501	Engineering/Industrial Management
		149999	Engineering, Other
		143901	Geological/Geophysical Engineering
		143601	Manufacturing Engineering
		143501	Industrial Engineering
		143401	Forest Engineering
		143301	Construction Engineering
		143201	Polymer/Plastics Engineering
		142801	Textile Sciences and Engineering
		142701	Systems Engineering
		142501	Petroleum Engineering
		142401	Ocean Engineering
		142301	Nuclear Engineering
		142201	Naval Architecture and Marine Engineering
		142101	Mining and Mineral Engineering
		142001	Metallurgical Engineering
		141901	Mechanical Engineering
		141801	Materials Engineering
		141401	Environmental/Environmental Health Engineering
		141301	Engineering Science
		141201	Engineering Physics
		141101	Engineering Mechanics
		141001	Electrical, Electronics and Communications Engineering
		140902	Computer Hardware Engineering
		140899	Civil Engineering, Other
		140805	Water Resources Engineering
		140804	Transportation and Highway Engineering
		140803	Structural Engineering
		140802	Geotechnical Engineering
		140801	Civil Engineering, General
		140701	Chemical Engineering
		140601	Ceramic Sciences and Engineering
		140501	Biomedical/Medical Engineering
		140401	Architectural Engineering
		140301	Agricultural/Biological Engineering and Bioengineering
		140201	Aerospace, Aeronautical and Astronautical Engineering
		140101	Engineering, General

Science and Mathematics Pathway

		450702	Cartography
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Cluster Title	Pathway Title	CIP Code	CIP Title
		400899	Physics, Other
		400810	Theoretical and Mathematical Physics
		400809	Acoustics
		400808	Solid State and Low-Temperature Physics
		400807	Optics/Optical Sciences
		400806	Nuclear Physics
		400805	Plasma and High-Temperature Physics
		400804	Elementary Particle Physics
		400802	Atomic/Molecular Physics
		400801	Physics, General
		400699	Geological and Earth Sciences/Geosciences, Other
		400607	Oceanography, Chemical and Physical
		400606	Geochemistry and Petrology
		400605	Hydrology and Water Resources Science
		400604	Paleontology
		400603	Geophysics and Seismology
		400602	Geochemistry
		400601	Geology/Earth Science, General
		400599	Chemistry, Other
		400508	Chemical Physics
		400507	Polymer Chemistry
		400506	Physical and Theoretical Chemistry
		400504	Organic Chemistry
		400503	Inorganic Chemistry
		400502	Analytical Chemistry
		400501	Chemistry, General
		400499	Atmospheric Sciences and Meteorology, Other
		400404	Meteorology
		400403	Atmospheric Physics and Dynamics
		400402	Atmospheric Chemistry and Climatology
		400401	Atmospheric Sciences and Meteorology, General
		400299	Astronomy and Astrophysics, Other
		400203	Planetary Astronomy and Science
		400202	Astrophysics
		400201	Astronomy
		279999	Mathematics and Statistics, Other
		270399	Applied Mathematics, Other
		270303	Computational Mathematics
		270301	Applied Mathematics
		270101	Mathematics, General
		261103	Bioinformatics
		143101	Materials Science

Transportation, Distribution, and Logistics Career Cluster

Environmental Service Systems Pathway

150704	Hazardous Materials Information Systems Technology/Technician
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Transportation Operations Pathway

Cluster Title	Pathway Title	CIP Code	CIP Title
		499999	Transportation and Materials Moving, Other
		490399	Marine Transportation, Other
		490309	Marine Science/Merchant Marine Officer
		490299	Ground Transportation, Other
		490205	Truck and Bus Driver/Commercial Vehicle Operation
		490108	Flight Instructor
		490105	Air Traffic Controller
		490104	Aviation/Airway Management and Operations
		490102	Airline/Commercial/Professional Pilot and Flight Crew
		490101	Aeronautics/Aviation/Aerospace Science & Technology, General
		150803	Automotive Engineering Technology/Technician
		150801	Aeronautical/Aerospace Engineering Technology/Technician
Logistics Planning and Management Services Pathway			
		520209	Transportation/Transportation Management
Facility and Mobile Equipment Maintenance Pathway			
		479999	Mechanic and Repair Technologies/Technicians, Other
		470699	Vehicle Maintenance and Repair Technologies, Other.
		470616	Marine Maintenance/Fitter & Ship Repair Technology/Technician
		470615	Engine Machinist
		470614	Alternative Fuel Vehicle Technology/Technician
		470613	Medium/Heavy Vehicle and Truck Technology/Technician
		470612	Vehicle Emissions Inspection & Maintenance Technology/Technician
		470611	Motorcycle Maintenance and Repair Technology/Technician
		470610	Bicycle Mechanics and Repair Technology/Technician
		470609	Avionics Maintenance Technology/Technician
		470608	Aircraft Powerplant Technology/Technician
		470607	Airframe Mechanics & Aircraft Maintenance Technology/Technician
		470606	Small Engine Mechanics and Repair Technology/Technician
		470605	Diesel Mechanics Technology/Technician
		470604	Automobile/Automotive Mechanics Technology/Technician
		470603	Autobody/Collision and Repair Technology/Technician
Sales and Service Pathway			
		521907	Vehicle & Vehicle Parts & Accessories Marketing Operations