# Labor Market Estimating Conference Executive Summary

July 14, 2023

The Labor Market Estimating Conference (LMEC) met on July 14, 2023 to discuss and adopt official information pursuant to s. 216.136, F.S. as amended by Chapter 2023-81, Laws of Florida. The cumulative impact of the law changes made during the 2023 Session charge the LMEC with providing long-term strategic direction regarding at-risk areas of Florida's labor market. The objective of the meeting was to focus on these areas of concern. With this in mind, the LMEC reviewed two products that were both introduced for the first time.

# 1. Occupational Areas of Concern (by educational requirement)

These occupations were identified by comparing occupational supply and demand in the 10th year of the forecast to determine where projected demand exceeds expected supply by more than 10%. Essentially, this condition means that: (1) demand exceeds supply currently and will continue to do so in the future, or (2) the growth in future demand will outpace the likely labor supply for that occupation. These findings were produced by a model run that simulated each occupation's employment supply and demand trajectories over the forecast period. The overall methodology:

- Used current occupational shares of the labor supply against the forecast adopted by the Florida Economic Estimating Conference for all future years.
- Selected a base year of potential demand from a maximum of five nonconsecutive years, using the assumption that demand must equal or exceed filled jobs. The base was then grown by various growth rates (predominately population-driven).

Although, some occupations have both limited supply and demand, the analysis found that there is reason to believe that a significant gap in supply will exist for 101 out of 832 discrete occupations (12.1%). Note that evolving or emerging trends have yet to be addressed. As such, this analysis does not alter the existing economic structure, meaning the results represent foundational imbalances that would be expected to persist into the future, absent intervention.

**CONFERENCE ACTION:** Officially adopted 101 discrete occupations as "Statewide Occupational Areas of Concern," as well as the methodology for lists by Workforce Region that may differ from the statewide list. See Conference Products for the adopted lists.

# 2. Critical Occupational Groups of Concern

The 101 occupational areas of concern were further organized by occupational group. By group, the demand for those occupations in the 10th year of the forecast was then compared to the total statewide demand for all occupations. By percentage of demand represented by the occupational areas of concern, two groups stand out: (1) Healthcare Practitioners and Technical Occupations with occupational areas of concern that represent 3.4% of statewide demand in that year; and (2) Healthcare Support Occupations with occupational areas of concern that represent 2.1% of statewide demand in that year. These occupational groups are particularly appropriate for this designation because the scopes of

practice for the underlying occupations are rapidly evolving with further changes expected over the next decade, making the precise job responsibilities more fluid and harder to predict.

**CONFERENCE ACTION:** The methodology and two proposed "Critical Occupational Groups of Concern" for healthcare were discussed, but official action was postponed until the next meeting.

A second conference will be scheduled during the summer 2023 conference season to address occupational wages and critical occupational groups of concern.

### Statewide Areas of Concern by Educational Requirement

Educational Requirement	SOC Code	SOC Title
No formal educational credential	27-1019	Artists and Related Workers, All Other
	27-2031	Dancers
	35-3041	Food Servers, Nonrestaurant
	37-2019	Building Cleaning Workers, All Other
	37-3019 39-3021	Grounds Maintenance Workers, All Other  Motion Picture Projectionists
	39-3021	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	47-3011	HelpersBrickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
	47-3016	Helpers-Roofers
	47-5013	Service Unit Operators, Oil and Gas
	47-5051	Rock Splitters, Quarry
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
	53-7041	Hoist and Winch Operators
	53-7062	Laborers and Freight, Stock, and Material Movers, Hand
High school diploma or equivalent	11-9071	Gambling Managers
	21-1094	Community Health Workers
	27-1023	Floral Designers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032	Choreographers
	27-4021	Photographers
	29-2092	Hearing Aid Specialists
	31-1120	Home Health and Personal Care Aides
	33-3011	Bailiffs
	37-3013	Tree Trimmers and Pruners
	39-3011	Gambling Dealers
	39-3093	Locker Room, Coatroom, and Dressing Room Attendants
	39-4021	Funeral Attendants
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	43-2011	Switchboard Operators, Including Answering Service
	43-3041 43-4111	Gambling Cage Workers
	47-2171	Interviewers, Except Eligibility and Loan Reinforcing Iron and Rebar Workers
	47-5081	HelpersExtraction Workers
	49-9011	Mechanical Door Repairers
	51-2041	Structural Metal Fabricators and Fitters
	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-6092	Fabric and Apparel Patternmakers
	51-7011	Cabinetmakers and Bench Carpenters
	51-7041	Sawing Machine Setters, Operators, and Tenders, Wood
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9111	Packaging and Filling Machine Operators and Tenders
	51-9194	Etchers and Engravers
<u> </u>	53-4011	Locomotive Engineers
Postsecondary nondegree award	29-2061	Licensed Practical and Licensed Vocational Nurses
	31-1131	Nursing Assistants
	31-9011	Massage Therapists
	35-2013	Cooks, Private Household
	39-5012	Hairdressers, Hairstylists, and Cosmetologists
	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers
	49-2097	Audiovisual Equipment Installers and Repairers
	51-4111	Tool and Die Makers
	53-5021	Captains, Mates, and Pilots of Water Vessels
	53-5031	Ship Engineers
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
	27-4012	Broadcast Technicians
	29-2031	Cardiovascular Technologists and Technicians
	29-2033	Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians

Educational Requirement	SOC Code	SOC Title
Bachelor's degree	11-1011	Chief Executives
	11-2011	Advertising and Promotions Managers
	17-1012	Landscape Architects
	17-1021	Cartographers and Photogrammetrists
	17-2031	Bioengineers and Biomedical Engineers
	17-2151	Mining and Geological Engineers, Including Mining Safety Engineers
	19-1023	Zoologists and Wildlife Biologists
	19-1031	Conservation Scientists
	19-2042	Geoscientists, Except Hydrologists and Geographers
	19-4021	Biological Technicians
	21-2099	Religious Workers, All Other
	25-4013	Museum Technicians and Conservators
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	27-3011	Broadcast Announcers and Radio Disc Jockeys
	29-1125	Recreational Therapists
	29-1129	Therapists, All Other
	29-1141	Registered Nurses
Master's degree	19-3011	Economists
	19-3039	Psychologists, All Other
	25-4011	Archivists
	25-4012	Curators
	29-1071	Physician Assistants
	29-1127	Speech-Language Pathologists
	29-1151	Nurse Anesthetists
	29-1171	Nurse Practitioners
Doctoral or professional degree	25-1011	Business Teachers, Postsecondary
	25-1053	Environmental Science Teachers, Postsecondary
	25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary
	25-1069	Social Sciences Teachers, Postsecondary, All Other
	25-1122	Communications Teachers, Postsecondary
	25-1193	Recreation and Fitness Studies Teachers, Postsecondary
	25-1199	Postsecondary Teachers, All Other
	29-1215	Family Medicine Physicians

# **Summary of Results**

		Occupational Areas
<b>Local Workforce Develop</b>	of Concern	
Workforce Region 1	CareerSource Escarosa	78
Workforce Region 2	CareerSource Okaloosa Walton	93
Workforce Region 3	CareerSource Chipola	28
Workforce Region 4	CareerSource Gulf Coast	52
Workforce Region 5	CareerSource Capital Region	60
Workforce Region 6	CareerSource North Florida	26
Workforce Region 7	CareerSource Florida Crown	37
Workforce Region 8	CareerSource Northeast Florida	149
Workforce Region 9	CareerSource North Central Florida	71
Workforce Region 10	CareerSource Citrus Levy Marion	80
Workforce Region 11	CareerSource Flagler Volusia	95
Workforce Region 12	CareerSource Central Florida	201
Workforce Region 13	CareerSource Brevard	85
Workforce Region 14	CareerSource Pinellas	56
Workforce Region 15	CareerSource Tampa Bay	143
Workforce Region 16	CareerSource Pasco Hernando	127
Workforce Region 17	CareerSource Polk	170
Workforce Region 18	CareerSource Suncoast	156
Workforce Region 19	CareerSource Heartland	30
Workforce Region 20	CareerSource Research Coast	120
Workforce Region 21	CareerSource Palm Beach County	90
Workforce Region 22	CareerSource Broward	80
Workforce Region 23	CareerSource South Florida	88
Workforce Region 24	CareerSource Southwest Florida	157

ducational Requirement	SOC Code	SOC Title
No formal educational credential	35-3041	Food Servers, Nonrestaurant  Ruilding Cleaning Workers, All Other
	37-2019 39-3021	Building Cleaning Workers, All Other  Motion Picture Projectionists
	39-3021	Ushers, Lobby Attendants, and Ticket Takers
	39-5093	Shampooers
	41-9011	Demonstrators and Product Promoters
	47-3012	HelpersCarpenters
	47-3016	HelpersRoofers
	47-5013	Service Unit Operators, Oil and Gas
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011 53-6021	Sailors and Marine Oilers  Parking Attendants
	53-7062	Parking Attendants  Laborers and Freight, Stock, and Material Movers, Hand
High school diploma or equivalent	21-1094	Community Health Workers
<b>5</b>	27-1023	Floral Designers
	27-2032	Choreographers
	27-4021	Photographers
	29-2092	Hearing Aid Specialists
	31-1120	Home Health and Personal Care Aides
	31-2012	Occupational Therapy Aides
	33-3011 37-3013	Bailiffs Tree Trimmers and Pruners
	39-3011	Gambling Dealers
	39-3093	Locker Room, Coatroom, and Dressing Room Attendants
	39-4021	Funeral Attendants
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	43-2011	Switchboard Operators, Including Answering Service
	43-4111 47-2171	Interviewers, Except Eligibility and Loan Reinforcing Iron and Rebar Workers
	51-2041	Structural Metal Fabricators and Fitters
	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-6092	Fabric and Apparel Patternmakers
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9111	Packaging and Filling Machine Operators and Tenders
B. d d d	51-9194	Etchers and Engravers
Postsecondary nondegree award	29-2061 31-1131	Licensed Practical and Licensed Vocational Nurses  Nursing Assistants
	35-2013	Cooks, Private Household
	39-5012	Hairdressers, Hairstylists, and Cosmetologists
	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers
	49-2097	Audiovisual Equipment Installers and Repairers
	53-5031	Ship Engineers
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
	19-4031	Chemical Technicians
	27-4012	Broadcast Technicians Cardiovascular Technicians
	29-2031 29-2033	Cardiovascular Technologists and Technicians  Nuclear Medicine Technologists
	29-2033 29-2035	Nuclear Medicine Technologists  Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
Bachelor's degree	11-1011	Chief Executives
-	17-2161	Nuclear Engineers
	19-4021	Biological Technicians
	25-4013	Museum Technicians and Conservators
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	29-1125 29-1129	Recreational Therapists Therapists, All Other
	29-1129 29-1141	Registered Nurses
Master's degree	19-3039	Psychologists, All Other
<b>U</b>	19-3093	Historians
	25-4011	Archivists
	25-4012	Curators
	29-1071	Physician Assistants
	29-1151	Nurse Anesthetists
Destaval or professional desure	29-1171	Nurse Practitioners
Doctoral or professional degree	25-1011 25-1053	Business Teachers, Postsecondary Environmental Science Teachers, Postsecondary
	25-1053	Area, Ethnic, and Cultural Studies Teachers, Postsecondary
	25-1069	Social Sciences Teachers, Postsecondary, All Other
	25-1122	Communications Teachers, Postsecondary
		Recreation and Fitness Studies Teachers, Postsecondary
	25-1193	necreation and raness statics reachers, rostsecondary
	25-1193 25-1199 29-1215	Postsecondary Teachers, All Other Family Medicine Physicians

Educational Requirement	SOC Code	SOC Title
No formal educational credential	27-1019	Artists and Related Workers, All Other
	27-2031	Dancers
	33-9091	Crossing Guards and Flaggers
	35-3041 27-2019	Food Servers, Nonrestaurant  Ruilding Cleaning Workers, All Other
	37-2019 39-3021	Building Cleaning Workers, All Other  Motion Picture Projectionists
	39-3021	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	47-3016	HelpersRoofers
	51-6052 53-3054	Tailors, Dressmakers, and Custom Sewers Taxi Drivers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
	53-7061	Cleaners of Vehicles and Equipment
High sahaal dialama ay assistatad	53-7062	Laborers and Freight, Stock, and Material Movers, Hand
High school diploma or equivalent	11-9071 11-9081	Gambling Managers Lodging Managers
	21-1094	Community Health Workers
	27-1023	Floral Designers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-4021 31-1120	Photographers  Home Health and Personal Care Aides
	33-3011	Bailiffs
	33-9021	Private Detectives and Investigators
	37-3013	Tree Trimmers and Pruners
	39-3011 39-3093	Gambling Dealers
	39-3093 39-6012	Locker Room, Coatroom, and Dressing Room Attendants Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	43-2011	Switchboard Operators, Including Answering Service
	43-4111 47-2171	Interviewers, Except Eligibility and Loan Reinforcing Iron and Rebar Workers
	51-2041	Structural Metal Fabricators and Fitters
	51-3092	Food Batchmakers
	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-5112 51-6092	Printing Press Operators  Entrie and Apparel Patternmakers
	51-7011	Fabric and Apparel Patternmakers Cabinetmakers and Bench Carpenters
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9111 51-9194	Packaging and Filling Machine Operators and Tenders  Etchers and Engravers
	51-9198	HelpersProduction Workers
Some college, no degree	43-4151	Order Clerks
Postsecondary nondegree award	29-2061	Licensed Practical and Licensed Vocational Nurses
	31-1131	Nursing Assistants
	31-9011 35-2013	Massage Therapists Cooks, Private Household
	39-5012	Hairdressers, Hairstylists, and Cosmetologists
	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers
	49-2097	Audiovisual Equipment Installers and Repairers
	53-5021 53-5031	Captains, Mates, and Pilots of Water Vessels Ship Engineers
Associate's degree	17-3026	Industrial Engineering Technologists and Technicians
_	17-3027	Mechanical Engineering Technologists and Technicians
	19-4031	Chemical Technicians
	27-4012 29-2031	Broadcast Technicians Cardiovascular Technologists and Technicians
	29-2031	Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
Rachalor's dograp	49-2091	Avionics Technicians Chief Evecutives
Bachelor's degree	11-1011 11-9039	Chief Executives Education Administrators, All Other
	17-1012	Landscape Architects
	17-2151	Mining and Geological Engineers, Including Mining Safety Engineers
	19-1023	Zoologists and Wildlife Biologists
	19-4021 25-2021	Biological Technicians Elementary School Teachers, Except Special Education
	25-4013	Museum Technicians and Conservators
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	29-1129 29-1141	Therapists, All Other Registered Nurses
Master's degree	19-3039	Psychologists, All Other
]	19-3093	Historians
	19-3094	Political Scientists
	25-4011	Archivists
	25-4012 29-1071	Curators Physician Assistants
	29-1127	Speech-Language Pathologists
	29-1151	Nurse Anesthetists
	29-1171	Nurse Practitioners
Doctoral or professional degree	19-3033	Clinical and Counseling Psychologists
	25-1011 25-1069	Business Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other
	25-1069 25-1122	Communications Teachers, Postsecondary
	25-1199	Postsecondary Teachers, All Other
	29-1214	Emergency Medicine Physicians
	29-1215	Family Medicine Physicians
	29-1221	Pediatricians, General

### Workforce Region 3 - Occupational Areas of Concern by Educational Requirement

ducational Requirement	SOC Code	SOC Title
No formal educational credential	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	47-3016	HelpersRoofers
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
High school diploma or equivalent	27-2023	Umpires, Referees, and Other Sports Officials
	27-4021	Photographers
	31-1120	Home Health and Personal Care Aides
	33-3011	Bailiffs
	37-3013	Tree Trimmers and Pruners
	39-3011	Gambling Dealers
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	47-2171	Reinforcing Iron and Rebar Workers
	51-2041	Structural Metal Fabricators and Fitters
Postsecondary nondegree award	35-2013	Cooks, Private Household
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
	27-4012	Broadcast Technicians
	29-2051	Dietetic Technicians
Bachelor's degree	27-1029	Designers, All Other
	29-1129	Therapists, All Other
Master's degree	25-4012	Curators
Doctoral or professional degree	25-1011	Business Teachers, Postsecondary
	25-1069	Social Sciences Teachers, Postsecondary, All Other
	25-1122	Communications Teachers, Postsecondary
	25-1199	Postsecondary Teachers, All Other

### Workforce Region 4 - Occupational Areas of Concern by Educational Requirement

ducational Requirement	SOC Code	SOC Title
No formal educational credential	37-2019	Building Cleaning Workers, All Other
	37-3019	Grounds Maintenance Workers, All Other
	41-9011	Demonstrators and Product Promoters
	47-3016	HelpersRoofers
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
High school diploma or equivalent	21-1094	Community Health Workers
	27-4021	Photographers
	31-1120	Home Health and Personal Care Aides
	33-3011	Bailiffs
	37-3013	Tree Trimmers and Pruners
	39-3011	Gambling Dealers
	39-3093	Locker Room, Coatroom, and Dressing Room Attendants
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	43-3041	Gambling Cage Workers
	43-4111	Interviewers, Except Eligibility and Loan
	47-2171	Reinforcing Iron and Rebar Workers
	51-2041	Structural Metal Fabricators and Fitters
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9111	Packaging and Filling Machine Operators and Tenders
Postsecondary nondegree award	31-1131	Nursing Assistants
	35-2013	Cooks, Private Household
	39-5012	Hairdressers, Hairstylists, and Cosmetologists
	49-2097	Audiovisual Equipment Installers and Repairers
	53-5021	Captains, Mates, and Pilots of Water Vessels
	53-5031	Ship Engineers
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
	19-4044	Hydrologic Technicians
	27-4012	Broadcast Technicians
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
Bachelor's degree	19-1023	Zoologists and Wildlife Biologists
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	29-1129	Therapists, All Other
	29-1141	Registered Nurses
Master's degree	19-3039	Psychologists, All Other
	25-4011	Archivists
	25-4012	Curators
	29-1071	Physician Assistants
	29-1151	Nurse Anesthetists
	29-1171	Nurse Practitioners
Doctoral or professional degree	25-1011	Business Teachers, Postsecondary
	25-1069	Social Sciences Teachers, Postsecondary, All Other
	25-1122	Communications Teachers, Postsecondary
	25-1193	Recreation and Fitness Studies Teachers, Postsecondary

### Workforce Region 5 - Occupational Areas of Concern by Educational Requirement

ducational Requirement	SOC Code	SOC Title
No formal educational credential	39-3021	Motion Picture Projectionists
	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	47-3016	HelpersRoofers
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
High school diploma or equivalent	21-1094	Community Health Workers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032	Choreographers
	27-4021	Photographers
	31-1120	Home Health and Personal Care Aides
	31-2012	Occupational Therapy Aides
	33-3011	Bailiffs
	37-3013	Tree Trimmers and Pruners
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	43-2011	Switchboard Operators, Including Answering Service
	43-3041	Gambling Cage Workers
	47-2171	Reinforcing Iron and Rebar Workers
	51-2041	Structural Metal Fabricators and Fitters
	51-6092	Fabric and Apparel Patternmakers
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9194	Etchers and Engravers
Postsecondary nondegree award	31-1131	Nursing Assistants
	35-2013	Cooks, Private Household
	49-2097	Audiovisual Equipment Installers and Repairers
	53-5031	Ship Engineers
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
•	19-4044	Hydrologic Technicians
	27-4012	Broadcast Technicians
	29-2031	Cardiovascular Technologists and Technicians
	29-2033	Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
Bachelor's degree	17-2151	Mining and Geological Engineers, Including Mining Safety Engineers
	19-1031	Conservation Scientists
	19-4021	Biological Technicians
	25-4013	Museum Technicians and Conservators
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	29-1129	Therapists, All Other
	29-1141	Registered Nurses
Master's degree	19-3039	Psychologists, All Other
Muster 5 degree	25-4011	Archivists
	25-4012	Curators
	29-1071	Physician Assistants
	29-1071	Nurse Anesthetists
	29-1151 29-1171	Nurse Practitioners
Doctoral or professional degree		Business Teachers, Postsecondary
Doctoral or professional degree	25-1011	,
	25-1053	Environmental Science Teachers, Postsecondary
	25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary
	25-1069	Social Sciences Teachers, Postsecondary, All Other
	25-1122	Communications Teachers, Postsecondary
	25-1193	Recreation and Fitness Studies Teachers, Postsecondary
	25-1199	Postsecondary Teachers, All Other

### Workforce Region 6 - Occupational Areas of Concern by Educational Requirement

ducational Requirement	SOC Code	SOC Title
No formal educational credential	37-2019	Building Cleaning Workers, All Other
	41-9011	Demonstrators and Product Promoters
	47-3016	HelpersRoofers
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
High school diploma or equivalent	21-1094	Community Health Workers
	27-2023	Umpires, Referees, and Other Sports Officials
	31-1120	Home Health and Personal Care Aides
	33-3011	Bailiffs
	37-3013	Tree Trimmers and Pruners
	39-3011	Gambling Dealers
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	47-2171	Reinforcing Iron and Rebar Workers
	51-2041	Structural Metal Fabricators and Fitters
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
Postsecondary nondegree award	35-2013	Cooks, Private Household
Bachelor's degree	27-1029	Designers, All Other
	29-1129	Therapists, All Other
Master's degree	25-4012	Curators
	29-1171	Nurse Practitioners
Doctoral or professional degree	25-1069	Social Sciences Teachers, Postsecondary, All Other

### Workforce Region 7 - Occupational Areas of Concern by Educational Requirement

ducational Requirement	SOC Code	SOC Title
No formal educational credential	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	47-3016	HelpersRoofers
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
High school diploma or equivalent	27-2023	Umpires, Referees, and Other Sports Officials
	27-4021	Photographers
	31-1120	Home Health and Personal Care Aides
	33-3011	Bailiffs
	37-3013	Tree Trimmers and Pruners
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	47-2171	Reinforcing Iron and Rebar Workers
	51-2041	Structural Metal Fabricators and Fitters
	51-4194	Tool Grinders, Filers, and Sharpeners
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
Postsecondary nondegree award	31-1131	Nursing Assistants
	35-2013	Cooks, Private Household
	51-4111	Tool and Die Makers
Bachelor's degree	11-1011	Chief Executives
	27-1029	Designers, All Other
	29-1129	Therapists, All Other
	29-1141	Registered Nurses
Master's degree	19-3039	Psychologists, All Other
	25-4012	Curators
	29-1151	Nurse Anesthetists
	29-1171	Nurse Practitioners
Doctoral or professional degree	25-1011	Business Teachers, Postsecondary
	25-1069	Social Sciences Teachers, Postsecondary, All Other
	25-1122	Communications Teachers, Postsecondary
	25-1199	Postsecondary Teachers, All Other
	29-1215	Family Medicine Physicians

ucational Requirement	SOC Code	SOC Title
No formal educational credential	27-1019	Artists and Related Workers, All Other
	27-2031	Dancers Crossing Guards and Flaggers
	33-9091 35-2019	Crossing Guards and Flaggers Cooks, All Other
	35-2019 35-3041	Food Servers, Nonrestaurant
	37-2019	Building Cleaning Workers, All Other
	39-3021	Motion Picture Projectionists
	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	41-9012	Models
	45-2091	Agricultural Equipment Operators
	45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals
	47-2043	Floor Sanders and Finishers
	47-3011	HelpersBrickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
	47-3012	HelpersCarpenters
	47-3016	HelpersRoofers
	47-5013	Service Unit Operators, Oil and Gas
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021 53-7041	Parking Attendants Heist and Winch Operators
	53-7041	Hoist and Winch Operators  Cleaners of Vehicles and Equipment
	53-7061	Cleaners of Vehicles and Equipment Laborers and Freight, Stock, and Material Movers, Hand
High school diploma or equivalent	11-9071	Gambling Managers
	11-9081	Lodging Managers
	19-5012	Occupational Health and Safety Technicians
	21-1094	Community Health Workers
	27-1023	Floral Designers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032	Choreographers
	27-4021	Photographers
	27-4099	Media and Communication Equipment Workers, All Other
	29-2092	Hearing Aid Specialists
	31-1120	Home Health and Personal Care Aides
	33-3011	Bailiffs
	33-9011	Animal Control Workers
	33-9021	Private Detectives and Investigators
	37-3013	Tree Trimmers and Pruners
	39-3011	Gambling Dealers
	39-3093	Locker Room, Coatroom, and Dressing Room Attendants
	39-4012	Crematory Operators
	39-4021 39-6012	Funeral Attendants Concierges
	39-6012 39-7010	Concierges Tour and Travel Guides
	39-7010	Residential Advisors
	41-3041	Travel Agents
	43-2011	Switchboard Operators, Including Answering Service
	43-3041	Gambling Cage Workers
	43-4111	Interviewers, Except Eligibility and Loan
	47-2121	Glaziers
	47-2171	Reinforcing Iron and Rebar Workers
	49-9011	Mechanical Door Repairers
	49-9063	Musical Instrument Repairers and Tuners
	49-9069	Precision Instrument and Equipment Repairers, All Other
	51-2041	Structural Metal Fabricators and Fitters
	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-4192	Layout Workers, Metal and Plastic
	51-6092	Fabric and Apparel Patternmakers
	51-6093	Upholsterers
	51-7011	Cabinetmakers and Bench Carpenters
	51-7041	Sawing Machine Setters, Operators, and Tenders, Wood
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-8092	Gas Plant Operators
	51-8099	Plant and System Operators, All Other
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders
	51-9111	Packaging and Filling Machine Operators and Tenders
	51-9194	Etchers and Engravers
	51-9197 51-0108	Tire Builders HelpersProduction Workers
	51-9198	HelpersProduction Workers
	E2 2044	
	53-3011	Ambulance Drivers and Attendants, Except Emergency Medical Technicians
	53-4011	Locomotive Engineers

ducational Requirement	SOC Code	SOC Title
Postsecondary nondegree award	27-4011	Audio and Video Technicians
	29-2061	Licensed Practical and Licensed Vocational Nurses
	31-1131	Nursing Assistants
	31-9011	Massage Therapists
	35-2013 39-5012	Cooks, Private Household
	49-2022	Hairdressers, Hairstylists, and Cosmetologists Telecommunications Equipment Installers and Repairers, Except Line Installers
	49-2022	Audiovisual Equipment Installers and Repairers
	51-4111	Tool and Die Makers
	53-5021	Captains, Mates, and Pilots of Water Vessels
	53-5022	Motorboat Operators
	53-5031	Ship Engineers
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
	17-3026	Industrial Engineering Technologists and Technicians
	17-3027	Mechanical Engineering Technologists and Technicians
	19-4031	Chemical Technicians
	27-4012	Broadcast Technicians
	29-2031	Cardiovascular Technologists and Technicians
	29-2033	Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
Bachelor's degree	11-1011	Chief Executives
	11-2011	Advertising and Promotions Managers
	11-9161	Emergency Management Directors
	17-1012	Landscape Architects
	17-1021	Cartographers and Photogrammetrists
	17-2031	Bioengineers and Biomedical Engineers
	17-2151	Mining and Geological Engineers, Including Mining Safety Engineers
	19-1023	Zoologists and Wildlife Biologists
	19-1031	Conservation Scientists
	19-1032	Foresters Atmospharia and Chase Scientists
	19-2021 19-2042	Atmospheric and Space Scientists
	19-2042	Geoscientists, Except Hydrologists and Geographers Hydrologists
	19-4021	Biological Technicians
	19-4061	Social Science Research Assistants
	21-2099	Religious Workers, All Other
	25-2021	Elementary School Teachers, Except Special Education
	25-4013	Museum Technicians and Conservators
	27-1022	Fashion Designers
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	27-3011	Broadcast Announcers and Radio Disc Jockeys
	29-1125	Recreational Therapists
	29-1129	Therapists, All Other
	29-1141	Registered Nurses
	33-3031	Fish and Game Wardens
	43-9081	Proofreaders and Copy Markers
	43-9111	Statistical Assistants
	45-2011	Agricultural Inspectors
Master's degree	19-3011	Economists
	19-3039	Psychologists, All Other
	25-4011	Archivists
	25-4012	Curators
	29-1071	Physician Assistants
	29-1127	Speech-Language Pathologists
	29-1151	Nurse Anesthetists
	29-1161 29-1171	Nurse Midwives Nurse Practitioners
Doctoral or professional degree	29-11/1 23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers
Doctoral or professional degree	25-1021 25-1011	Business Teachers, Postsecondary
	25-1011	Environmental Science Teachers, Postsecondary
	25-1053	Area, Ethnic, and Cultural Studies Teachers, Postsecondary
	25-1069	Social Sciences Teachers, Postsecondary, All Other
	25-1122	Communications Teachers, Postsecondary
	25-1193	Recreation and Fitness Studies Teachers, Postsecondary
	25-1199	Postsecondary Teachers, All Other
	29-1022	Oral and Maxillofacial Surgeons
	29-1029	Dentists, All Other Specialists
	29-1181	Audiologists
	29-1213	Dermatologists
	29-1215	Family Medicine Physicians

Educational Requirement	SOC Code	SOC Title
No formal educational credential	35-3041	Food Servers, Nonrestaurant
	37-2019	Building Cleaning Workers, All Other
	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	41-9011 41-9012	Demonstrators and Product Promoters  Models
	47-3012	HelpersRoofers
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
High school diploma or equivalent	21-1094	Community Health Workers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032	Choreographers
	27-4021	Photographers
	31-1120	Home Health and Personal Care Aides
	31-2012	Occupational Therapy Aides
	33-3011	Bailiffs
	37-3013	Tree Trimmers and Pruners
	39-3093	Locker Room, Coatroom, and Dressing Room Attendants
	39-6012 39-7010	Concierges Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	43-2011	Switchboard Operators, Including Answering Service
	43-3041	Gambling Cage Workers
	43-4111	Interviewers, Except Eligibility and Loan
	47-2171	Reinforcing Iron and Rebar Workers
	47-5099	Extraction Workers, All Other
	51-2041	Structural Metal Fabricators and Fitters
	51-6092	Fabric and Apparel Patternmakers
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
Destance demonstrate and accord	51-9194	Etchers and Engravers
Postsecondary nondegree award	29-2061 31-1131	Licensed Practical and Licensed Vocational Nurses Nursing Assistants
	35-2013	Cooks, Private Household
	39-5012	Hairdressers, Hairstylists, and Cosmetologists
	49-2097	Audiovisual Equipment Installers and Repairers
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
	27-4012	Broadcast Technicians
	29-2031	Cardiovascular Technologists and Technicians
	29-2033	Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
Bachelor's degree	11-1011	Chief Executives
	17-2161	Nuclear Engineers Zoologists and Wildlife Biologists
	19-1023 19-1031	Conservation Scientists
	19-4021	Biological Technicians
	25-4013	Museum Technicians and Conservators
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	29-1125	Recreational Therapists
	29-1129	Therapists, All Other
	29-1141	Registered Nurses
Master's degree	19-3039	Psychologists, All Other
	19-3093	Historians
	25-4011	Archivists
	25-4012	Curators
	29-1071	Physician Assistants
	29-1151	Nurse Practitioners
	29-1171	Nurse Practitioners
Doctoral or professional degree	29-9092 25-1011	Genetic Counselors  Rusiness Teachers Postsecondary
Doctoral or professional degree	25-1011 25-1053	Business Teachers, Postsecondary  Environmental Science Teachers, Postsecondary
	25-1053 25-1062	Environmental Science Teachers, Postsecondary  Area, Ethnic, and Cultural Studies Teachers, Postsecondary
	25-1062 25-1069	Social Sciences Teachers, Postsecondary, All Other
	25-1009	Communications Teachers, Postsecondary
	25-1193	Recreation and Fitness Studies Teachers, Postsecondary
	25-1199	Postsecondary Teachers, All Other
	29-1215	Family Medicine Physicians

ducational Requirement	SOC Code 27-2031	SOC Title
No formal educational credential	27-2031 35-3041	Dancers Food Servers, Nonrestaurant
	37-2019	Building Cleaning Workers, All Other
	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals
	47-3011	HelpersBrickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
	47-3012	HelpersCarpenters
	47-3016	HelpersRoofers
	47-5012	Rotary Drill Operators, Oil and Gas
	47-5013	Service Unit Operators, Oil and Gas
	51-6052	Tailors, Dressmakers, and Custom Sewers
	51-9031	Cutters and Trimmers, Hand
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
	53-7062	Laborers and Freight, Stock, and Material Movers, Hand
High school diploma or equivalent	11-9071	Gambling Managers
	21-1094	Community Health Workers
	27-1023	Floral Designers
	27-4021	Photographers
	31-1120	Home Health and Personal Care Aides
	31-2012	Occupational Therapy Aides
	33-3011	Bailiffs
	37-3013	Tree Trimmers and Pruners
	39-3011	Gambling Dealers
	39-3093	Locker Room, Coatroom, and Dressing Room Attendants
	39-4021	Funeral Attendants
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	43-2011	Switchboard Operators, Including Answering Service
	43-4111	Interviewers, Except Eligibility and Loan
	47-2171	Reinforcing Iron and Rebar Workers
	49-9011	Mechanical Door Repairers
	51-2041	Structural Metal Fabricators and Fitters
	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-6092	Fabric and Apparel Patternmakers
	51-7041	Sawing Machine Setters, Operators, and Tenders, Wood
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-9023 51-9111	Mixing and Blending Machine Setters, Operators, and Tenders Packaging and Filling Machine Operators and Tenders
	51-9111	Etchers and Engravers
Some college, no degree	43-4151	Order Clerks
Postsecondary nondegree award	31-1131	Nursing Assistants
rostsecondary nondegree award	31-9011	Massage Therapists
	35-2013	Cooks, Private Household
	39-5012	Hairdressers, Hairstylists, and Cosmetologists
	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers
	49-2097	Audiovisual Equipment Installers and Repairers
	53-5031	Ship Engineers
Associate's degree	17-3022	Civil Engineering Technologists and Technicians
-0	17-3026	Industrial Engineering Technologists and Technicians
	29-2031	Cardiovascular Technologists and Technicians
	29-2033	Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
Bachelor's degree	11-1011	Chief Executives
	19-1023	Zoologists and Wildlife Biologists
	19-1031	Conservation Scientists
	25-4013	Museum Technicians and Conservators
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	27-3091	Interpreters and Translators
	29-1125	Recreational Therapists
	29-1129	Therapists, All Other
	29-1141	Registered Nurses
Master's degree	19-3039	Psychologists, All Other
	25-4011	Archivists
	25-4012	Curators
	29-1071	Physician Assistants
	29-1151	Nurse Anesthetists
	20.4474	Nurse Practitioners
	29-1171	
Doctoral or professional degree	29-11/1 25-1011	Business Teachers, Postsecondary
Doctoral or professional degree		
Doctoral or professional degree	25-1011	Business Teachers, Postsecondary
Doctoral or professional degree	25-1011 25-1062	Business Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other Communications Teachers, Postsecondary
Doctoral or professional degree	25-1011 25-1062 25-1069	Business Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other

ucational Requirement  No formal educational credential	SOC Code 27-2031	SOC Title Dancers
140 Torrinai educational Credential	35-2019	Cooks, All Other
	35-3041	Food Servers, Nonrestaurant
	37-2019	Building Cleaning Workers, All Other
	39-3021	Motion Picture Projectionists
	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	47-3011	HelpersBrickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
	47-3016	HelpersRoofers
	47-5013	Service Unit Operators, Oil and Gas
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
	53-7061	Cleaners of Vehicles and Equipment
	53-7062	Laborers and Freight, Stock, and Material Movers, Hand
High school diploma or equivalent	11-9071	Gambling Managers
<b>6</b>	21-1094	Community Health Workers
	27-1023	Floral Designers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032	Choreographers
	27-4021	Photographers
	29-2092	Hearing Aid Specialists
	31-1120	Home Health and Personal Care Aides
	33-3011	Bailiffs
	33-9021	Private Detectives and Investigators
	37-3013	Tree Trimmers and Pruners
	39-3011	Gambling Dealers
	39-3093	Locker Room, Coatroom, and Dressing Room Attendants
	39-4021	Funeral Attendants
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	43-2011	Switchboard Operators, Including Answering Service
	43-3041	Gambling Cage Workers
	43-4111	Interviewers, Except Eligibility and Loan
	47-2171	Reinforcing Iron and Rebar Workers
	49-9011	Mechanical Door Repairers
	51-2041	Structural Metal Fabricators and Fitters
	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-4192	Layout Workers, Metal and Plastic
	51-6063	Textile Knitting and Weaving Machine Setters, Operators, and Tenders
	51-6092	Fabric and Apparel Patternmakers
	51-6093	Upholsterers
	51-7011	Cabinetmakers and Bench Carpenters
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9111	Packaging and Filling Machine Operators and Tenders
	51-9194	Etchers and Engravers
	53-4041	Subway and Streetcar Operators
Some college, no degree	43-4151	Order Clerks
Postsecondary nondegree award	29-2061	Licensed Practical and Licensed Vocational Nurses
,	31-1131	Nursing Assistants
	31-9011	Massage Therapists
	35-2013	Cooks, Private Household
	39-5012	Hairdressers, Hairstylists, and Cosmetologists
	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers
	49-2097	Audiovisual Equipment Installers and Repairers
	53-5021	Captains, Mates, and Pilots of Water Vessels
	53-5031	Ship Engineers
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
	17-3027	Mechanical Engineering Technologists and Technicians
	19-4031	Chemical Technicians
	27-4012	Broadcast Technicians
	29-1124	Radiation Therapists
	29-2031	Cardiovascular Technologists and Technicians
	29-2033	Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
Bachelor's degree	11-1011	Chief Executives
	13-2081	Tax Examiners and Collectors, and Revenue Agents
	17-1012	Landscape Architects
	19-4021	Biological Technicians
	27-1027	Set and Exhibit Designers
	27-1027	Designers, All Other
	29-1125	Recreational Therapists
	29-1129	Therapists, All Other
	29-1123	Registered Nurses
Master's degree	19-3039	Psychologists, All Other
Master's degree	25-4011	Archivists
ividatel a degree		Curators
inuscer suegree		
musici s uegree	25-4012	
musica s degree	25-4012 29-1071	Physician Assistants
musici suegice	25-4012 29-1071 29-1127	Physician Assistants Speech-Language Pathologists
munci s vegree	25-4012 29-1071 29-1127 29-1151	Physician Assistants Speech-Language Pathologists Nurse Anesthetists
musici s degree	25-4012 29-1071 29-1127 29-1151 29-1171	Physician Assistants Speech-Language Pathologists Nurse Anesthetists Nurse Practitioners
	25-4012 29-1071 29-1127 29-1151 29-1171 29-9092	Physician Assistants Speech-Language Pathologists Nurse Anesthetists Nurse Practitioners Genetic Counselors
Doctoral or professional degree	25-4012 29-1071 29-1127 29-1151 29-1171 29-9092 25-1011	Physician Assistants Speech-Language Pathologists Nurse Anesthetists Nurse Practitioners Genetic Counselors Business Teachers, Postsecondary
	25-4012 29-1071 29-1127 29-1151 29-1171 29-9092 25-1011 25-1031	Physician Assistants Speech-Language Pathologists Nurse Anesthetists Nurse Practitioners Genetic Counselors Business Teachers, Postsecondary Architecture Teachers, Postsecondary
	25-4012 29-1071 29-1127 29-1151 29-1171 29-9092 25-1011 25-1031 25-1053	Physician Assistants Speech-Language Pathologists Nurse Anesthetists Nurse Practitioners Genetic Counselors Business Teachers, Postsecondary Architecture Teachers, Postsecondary Environmental Science Teachers, Postsecondary
	25-4012 29-1071 29-1127 29-1151 29-1171 29-9092 25-1011 25-1031 25-1053 25-1062	Physician Assistants Speech-Language Pathologists Nurse Anesthetists Nurse Practitioners Genetic Counselors Business Teachers, Postsecondary Architecture Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary
	25-4012 29-1071 29-1127 29-1151 29-1171 29-9092 25-1011 25-1031 25-1053 25-1062 25-1069	Physician Assistants Speech-Language Pathologists Nurse Anesthetists Nurse Practitioners Genetic Counselors Business Teachers, Postsecondary Architecture Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other
	25-4012 29-1071 29-1127 29-1151 29-1171 29-9092 25-1011 25-1053 25-1062 25-1069 25-1122	Physician Assistants Speech-Language Pathologists Nurse Anesthetists Nurse Practitioners Genetic Counselors Business Teachers, Postsecondary Architecture Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other Communications Teachers, Postsecondary
	25-4012 29-1071 29-1127 29-1151 29-1171 29-9092 25-1011 25-1031 25-1053 25-1062 25-1069	Physician Assistants Speech-Language Pathologists Nurse Anesthetists Nurse Practitioners Genetic Counselors Business Teachers, Postsecondary Architecture Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other

No formal educational credential	SOC Code	SOC Title
No formal educational credential	27-1012 27-1019	Craft Artists Artists and Related Workers, All Other
	27-1019 27-2031	Artists and Related Workers, All Other Dancers
	33-9091	Crossing Guards and Flaggers
	35-2019	Cooks, All Other
	35-3041	Food Servers, Nonrestaurant
	37-2019	Building Cleaning Workers, All Other
	37-3019	Grounds Maintenance Workers, All Other
	39-3021	Motion Picture Projectionists
	39-3031 39-5093	Ushers, Lobby Attendants, and Ticket Takers Shampooers
	41-9011	Demonstrators and Product Promoters
	45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals
	45-2099	Agricultural Workers, All Other
	47-2043	Floor Sanders and Finishers
	47-2142	Paperhangers
	47-3011	HelpersBrickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
	47-3012 47-3016	HelpersCarpenters HelpersRoofers
	47-5013	Service Unit Operators, Oil and Gas
	47-5049	Underground Mining Machine Operators, All Other
	47-5051	Rock Splitters, Quarry
	47-5071	Roustabouts, Oil and Gas
	51-3021	Butchers and Meat Cutters
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011 53-6021	Sailors and Marine Oilers Parking Attendants
	53-6021 53-7041	Parking Attendants Hoist and Winch Operators
	53-7061	Cleaners of Vehicles and Equipment
	53-7062	Laborers and Freight, Stock, and Material Movers, Hand
ligh school diploma or equivalent	11-9051	Food Service Managers
	11-9071	Gambling Managers
	11-9081	Lodging Managers
	11-9131	Postmasters and Mail Superintendents Community Health Workers
	21-1094 27-1023	Community Health Workers Floral Designers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032	Choreographers
	27-4021	Photographers
	29-2092	Hearing Aid Specialists
	31-1120	Home Health and Personal Care Aides
	33-2022 33-3011	Forest Fire Inspectors and Prevention Specialists Bailiffs
	33-3011	Parking Enforcement Workers
	33-9011	Animal Control Workers
	33-9021	Private Detectives and Investigators
	33-9031	Gambling Surveillance Officers and Gambling Investigators
	37-3013	Tree Trimmers and Pruners
	39-3011	Gambling Dealers
	39-3019	Gambling Service Workers, All Other
	39-3093 39-4012	Locker Room, Coatroom, and Dressing Room Attendants Crematory Operators
	39-4021	Funeral Attendants
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	43-2011 43-3021	Switchboard Operators, Including Answering Service
	43-3021	Billing and Posting Clerks Gambling Cage Workers
	43-4111	Interviewers, Except Eligibility and Loan
	45-4022	Logging Equipment Operators
	47-2022	Stonemasons
	47-2053	Terrazzo Workers and Finishers
	47-2072	Pile Driver Operators
	47-2121	Glaziers  Reinforging Iron and Rober Workers
	47-2171 47-5032	Reinforcing Iron and Rebar Workers Explosives Workers, Ordnance Handling Experts, and Blasters
	47-5032 47-5081	Explosives Workers, Ordnance Handling Experts, and Blasters HelpersExtraction Workers
	49-9011	Mechanical Door Repairers
	49-9069	Precision Instrument and Equipment Repairers, All Other
	49-9096	Riggers
	49-9097	Signal and Track Switch Repairers
	51-2021	Coil Winders, Tapers, and Finishers
	51-2041 51-4022	Structural Metal Fabricators and Fitters Forging Machine Setters, Operators, and Tenders, Metal and Plastic
	51-4022	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic
	51-4023	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-4071	Foundry Mold and Coremakers
	51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic
	51-6062	Textile Cutting Machine Setters, Operators, and Tenders  Textile Winding Truiting and Drawing Out Machine Setters, Operators, and Tenders
	51-6064 51-6092	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders
	51-6092 51-6093	Fabric and Apparel Patternmakers Upholsterers
	51-6099	Textile, Apparel, and Furnishings Workers, All Other
	51-7011	Cabinetmakers and Bench Carpenters
	51-7041	Sawing Machine Setters, Operators, and Tenders, Wood
	51-7099	Woodworkers, All Other
	51-8021	Stationary Engineers and Boiler Operators
	51-8091	Chemical Plant and System Operators
	51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers
	51-8099 51-9023	Plant and System Operators, All Other Mixing and Blanding Machine Setters, Operators, and Tenders
	51-9023 51-9041	Mixing and Blending Machine Setters, Operators, and Tenders Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders
	21-2041	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders
	51-9051	
	51-9051 51-9111	
		Packaging and Filling Machine Operators and Tenders Photographic Process Workers and Processing Machine Operators
	51-9111	Packaging and Filling Machine Operators and Tenders
	51-9111 51-9151	Packaging and Filling Machine Operators and Tenders Photographic Process Workers and Processing Machine Operators

Workforce Region 12 - Occupational Areas of Concern by Educational Requirement

cational Requirement	SOC Code 53-7031	SOC Title Dredge Operators
	53-7031	Gas Compressor and Gas Pumping Station Operators
Some college, no degree	43-4151	Order Clerks
Postsecondary nondegree award	27-4011	Audio and Video Technicians
	29-2061 31-1131	Licensed Practical and Licensed Vocational Nurses Nursing Assistants
	31-9011	Massage Therapists
	35-2013	Cooks, Private Household
	39-5011	Barbers
	39-5012	Hairdressers, Hairstylists, and Cosmetologists
	49-2022 49-2093	Telecommunications Equipment Installers and Repairers, Except Line Installers Electrical and Electronics Installers and Repairers, Transportation Equipment
	49-2093	Audiovisual Equipment Installers and Repairers
	49-9092	Commercial Divers
	51-4111	Tool and Die Makers
	53-5021	Captains, Mates, and Pilots of Water Vessels
Associate la degree	53-5031	Ship Engineers  Girll Engineering Technologists and Technologists
Associate's degree	17-3022 17-3024	Civil Engineering Technologists and Technicians Electro-Mechanical and Mechatronics Technologists and Technicians
	17-3025	Environmental Engineering Technologists and Technicians
	17-3026	Industrial Engineering Technologists and Technicians
	17-3027	Mechanical Engineering Technologists and Technicians
	19-4012 19-4031	Agricultural Technicians Chemical Technicians
	25-2011	Preschool Teachers, Except Special Education
	27-4012	Broadcast Technicians
	29-1124	Radiation Therapists
	29-2031	Cardiovascular Technologists and Technicians
	29-2033 29-2035	Nuclear Medicine Technologists  Magnetic Resonance Imaging Technologists
	29-2035 29-2051	Magnetic Resonance Imaging Technologists  Dietetic Technicians
	39-4011	Embalmers
	43-9031	Desktop Publishers
Bachelor's degree	11-1011	Chief Executives
	11-2011 11-2033	Advertising and Promotions Managers Fundraising Managers
	11-9041	Architectural and Engineering Managers
	13-1121	Meeting, Convention, and Event Planners
	13-2081	Tax Examiners and Collectors, and Revenue Agents
	17-1012	Landscape Architects
	17-1021 17-2031	Cartographers and Photogrammetrists Bioengineers and Biomedical Engineers
	17-2031	Chemical Engineers
	17-2151	Mining and Geological Engineers, Including Mining Safety Engineers
	19-1012	Food Scientists and Technologists
	19-1022	Microbiologists
	19-1023 19-1031	Zoologists and Wildlife Biologists Conservation Scientists
	19-1031	Life Scientists, All Other
	19-2021	Atmospheric and Space Scientists
	19-2032	Materials Scientists
	19-2042	Geoscientists, Except Hydrologists and Geographers
	19-2043 19-2099	Hydrologists Physical Scientists, All Other
	19-4021	Biological Technicians
	21-2099	Religious Workers, All Other
	23-1022	Arbitrators, Mediators, and Conciliators
	25-2021	Elementary School Teachers, Except Special Education
	25-4013 27-1027	Museum Technicians and Conservators Set and Exhibit Designers
	27-1029	Designers, All Other
	27-3011	Broadcast Announcers and Radio Disc Jockeys
	27-3091	Interpreters and Translators
	29-1125	Recreational Therapists
	29-1129 29-1141	Therapists, All Other Registered Nurses
	29-2036	Medical Dosimetrists
	41-9031	Sales Engineers
	43-9081	Proofreaders and Copy Markers
Master's degree	19-1041	Epidemiologists  Economists
	19-3011 19-3039	Economists Psychologists, All Other
	19-3041	Sociologists
	19-3051	Urban and Regional Planners
	19-3091	Anthropologists and Archeologists
	25-4011	Archivists
	25-4012 29-1071	Curators Physician Assistants
	29-1127	Speech-Language Pathologists
	29-1151	Nurse Anesthetists
		Nivera Departition and
	29-1171	Nurse Practitioners
	29-1171 29-1291	Acupuncturists
Doctoral or professional degree	29-1171 29-1291 29-2091	Acupuncturists Orthotists and Prosthetists
Doctoral or professional degree	29-1171 29-1291	Acupuncturists
Doctoral or professional degree	29-1171 29-1291 29-2091 19-2012 23-1021 25-1011	Acupuncturists Orthotists and Prosthetists Physicists Administrative Law Judges, Adjudicators, and Hearing Officers Business Teachers, Postsecondary
Doctoral or professional degree	29-1171 29-1291 29-2091 19-2012 23-1021 25-1011 25-1031	Acupuncturists Orthotists and Prosthetists Physicists Administrative Law Judges, Adjudicators, and Hearing Officers Business Teachers, Postsecondary Architecture Teachers, Postsecondary
Doctoral or professional degree	29-1171 29-1291 29-2091 19-2012 23-1021 25-1011 25-1031 25-1053	Acupuncturists Orthotists and Prosthetists Physicists Administrative Law Judges, Adjudicators, and Hearing Officers Business Teachers, Postsecondary Architecture Teachers, Postsecondary Environmental Science Teachers, Postsecondary
Doctoral or professional degree	29-1171 29-1291 29-2091 19-2012 23-1021 25-1011 25-1031 25-1053 25-1062	Acupuncturists Orthotists and Prosthetists Physicists Administrative Law Judges, Adjudicators, and Hearing Officers Business Teachers, Postsecondary Architecture Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary
Doctoral or professional degree	29-1171 29-1291 29-2091 19-2012 23-1021 25-1011 25-1031 25-1053	Acupuncturists Orthotists and Prosthetists Physicists Administrative Law Judges, Adjudicators, and Hearing Officers Business Teachers, Postsecondary Architecture Teachers, Postsecondary Environmental Science Teachers, Postsecondary
Doctoral or professional degree	29-1171 29-1291 29-2091 19-2012 23-1021 25-1011 25-1031 25-1053 25-1062 25-1069	Acupuncturists Orthotists and Prosthetists Physicists Administrative Law Judges, Adjudicators, and Hearing Officers Business Teachers, Postsecondary Architecture Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other
Doctoral or professional degree	29-1171 29-1291 29-2091 19-2012 23-1021 25-1011 25-1011 25-1053 25-1062 25-1069 25-1122 25-1193	Acupuncturists Orthotists and Prosthetists Physicists Administrative Law Judges, Adjudicators, and Hearing Officers Business Teachers, Postsecondary Architecture Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other Communications Teachers, Postsecondary Recreation and Fitness Studies Teachers, Postsecondary Postsecondary Teachers, All Other
Doctoral or professional degree	29-1171 29-1291 29-2091 19-2012 23-1021 25-1031 25-1053 25-1069 25-1192 25-1199 29-1022	Acupuncturists Orthotists and Prosthetists Physicists Administrative Law Judges, Adjudicators, and Hearing Officers Business Teachers, Postsecondary Architecture Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other Communications Teachers, Postsecondary Recreation and Fitness Studies Teachers, Postsecondary Postsecondary Teachers, All Other Oral and Maxillofacial Surgeons
Doctoral or professional degree	29-1171 29-1291 29-2091 19-2012 23-1021 25-1011 25-1031 25-1062 25-1062 25-1069 25-1193 25-1199 29-1022 29-1022	Acupuncturists Orthotists and Prosthetists Physicists Administrative Law Judges, Adjudicators, and Hearing Officers Business Teachers, Postsecondary Architecture Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other Communications Teachers, Postsecondary Recreation and Fitness Studies Teachers, Postsecondary Postsecondary Teachers, All Other Oral and Maxillofacial Surgeons Orthodontists
Doctoral or professional degree	29-1171 29-1291 29-2091 19-2012 23-1021 25-1031 25-1053 25-1069 25-1192 25-1199 29-1022	Acupuncturists Orthotists and Prosthetists Physicists Administrative Law Judges, Adjudicators, and Hearing Officers Business Teachers, Postsecondary Architecture Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other Communications Teachers, Postsecondary Recreation and Fitness Studies Teachers, Postsecondary Postsecondary Teachers, All Other Oral and Maxillofacial Surgeons

ucational Requirement	SOC Code	SOC Title
No formal educational credential	35-3041	Food Servers, Nonrestaurant
	37-2019	Building Cleaning Workers, All Other
	39-3021 39-3031	Motion Picture Projectionists Ushers, Lobby Attendants, and Ticket Takers
	39-5093	Shampooers
	41-9011	Demonstrators and Product Promoters
	47-3011	HelpersBrickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
	47-3016	HelpersRoofers
	47-5012	Rotary Drill Operators, Oil and Gas
	47-5013	Service Unit Operators, Oil and Gas
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
	53-7062	Laborers and Freight, Stock, and Material Movers, Hand
High school diploma or equivalent	11-9071	Gambling Managers
	21-1094	Community Health Workers
	27-1023 27-2032	Floral Designers Choreographers
	27-2032	Photographers
	29-2092	Hearing Aid Specialists
	31-1120	Home Health and Personal Care Aides
	31-2012	Occupational Therapy Aides
	33-3011	Bailiffs
	37-3013	Tree Trimmers and Pruners
	39-3011	Gambling Dealers
	39-3093	Locker Room, Coatroom, and Dressing Room Attendants
	39-4021	Funeral Attendants
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	43-2011	Switchboard Operators, Including Answering Service
	43-3041	Gambling Cage Workers
	43-4111	Interviewers, Except Eligibility and Loan
	47-2171 47-5081	Reinforcing Iron and Rebar Workers HelpersExtraction Workers
	49-9011	Mechanical Door Repairers
	49-9096	Riggers
	51-2041	Structural Metal Fabricators and Fitters
	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-6063	Textile Knitting and Weaving Machine Setters, Operators, and Tenders
	51-6092	Fabric and Apparel Patternmakers
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9111	Packaging and Filling Machine Operators and Tenders
	51-9194	Etchers and Engravers
Postsecondary nondegree award	29-2061	Licensed Practical and Licensed Vocational Nurses
	31-1131 35-2013	Nursing Assistants Cooks, Private Household
	39-5012	Hairdressers, Hairstylists, and Cosmetologists
	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers
	49-2097	Audiovisual Equipment Installers and Repairers
	51-4111	Tool and Die Makers
	53-5021	Captains, Mates, and Pilots of Water Vessels
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
	29-2031	Cardiovascular Technologists and Technicians
	29-2033	Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
Bachelor's degree	11-1011	Chief Executives
	17-1012	Landscape Architects
	17-2031	Bioengineers and Biomedical Engineers
	19-1023	Zoologists and Wildlife Biologists  Geographers
	19-2042 19-4021	Geoscientists, Except Hydrologists and Geographers Biological Technicians
	25-4013	Museum Technicians and Conservators
	25-4013 27-1027	Set and Exhibit Designers
	27-1027	Designers, All Other
	29-1125	Recreational Therapists
	29-1129	Therapists, All Other
	29-1141	Registered Nurses
Master's degree	19-3039	Psychologists, All Other
	19-3094	Political Scientists
	25-4011	Archivists
	25-4012	Curators
	29-1071	Physician Assistants
	29-1151	Nurse Anesthetists
	29-1171	Nurse Practitioners
Doctoral or professional degree	25-1011	Business Teachers, Postsecondary
	25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary
	25-1069	Social Sciences Teachers, Postsecondary, All Other
		Lommunications Loachars Bostsocondary
	25-1122	Communications Teachers, Postsecondary
	25-1122 25-1193 25-1199	Recreation and Fitness Studies Teachers, Postsecondary Postsecondary Teachers, All Other

### Workforce Region 14 - Occupational Areas of Concern by Educational Requirement

ucational Requirement	SOC Code	SOC Title
No formal educational credential	27-2031	Dancers
	39-3021	Motion Picture Projectionists
	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	47-3016	HelpersRoofers
	47-5012	Rotary Drill Operators, Oil and Gas
	47-5013	Service Unit Operators, Oil and Gas
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
High school diploma or equivalent	21-1094	Community Health Workers
riigii serioor arpiorita or equivalent	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032	Choreographers
	27-4021	Photographers
	31-1120	Home Health and Personal Care Aides
	33-3011	Bailiffs
	37-3011	Tree Trimmers and Pruners
	39-3013	
		Locker Room, Coatroom, and Dressing Room Attendants
	39-6012	Concierges Taylord Travel Cuides
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	43-2021	Telephone Operators
	43-3041	Gambling Cage Workers
	47-2171	Reinforcing Iron and Rebar Workers
	47-5081	HelpersExtraction Workers
	51-2041	Structural Metal Fabricators and Fitters
	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-6042	Shoe Machine Operators and Tenders
	51-6092	Fabric and Apparel Patternmakers
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9194	Etchers and Engravers
Postsecondary nondegree award	35-2013	Cooks, Private Household
	49-2097	Audiovisual Equipment Installers and Repairers
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
	27-4012	Broadcast Technicians
	29-2051	Dietetic Technicians
Bachelor's degree	17-2171	Petroleum Engineers
-	25-4013	Museum Technicians and Conservators
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	29-1129	Therapists, All Other
Master's degree	19-3039	Psychologists, All Other
_	19-3094	Political Scientists
	25-4011	Archivists
	25-4012	Curators
Doctoral or professional degree	25-1011	Business Teachers, Postsecondary
	25-1031	Architecture Teachers, Postsecondary
	25-1053	Environmental Science Teachers, Postsecondary
	25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary
	25-1002	Social Sciences Teachers, Postsecondary, All Other
	25-1069	Communications Teachers, Postsecondary
	25-1122 25-1193	Recreation and Fitness Studies Teachers, Postsecondary
	Z3-1133	necreation and rithess studies reachers, rustsecundary
	25-1199	Postsecondary Teachers, All Other

ducational Requirement	SOC Code	SOC Title
No formal educational credential	27-1019	Artists and Related Workers, All Other
	27-2031	Dancers Country of Flynning
	33-9091	Crossing Guards and Flaggers
	35-2019	Cooks, All Other
	35-3041 37-2019	Food Servers, Nonrestaurant  Puilding Cleaning Workers, All Other
	39-3021	Building Cleaning Workers, All Other  Motion Picture Projectionists
	39-3021	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	41-9012	Models
	45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals
	47-2043	Floor Sanders and Finishers
	47-2142	Paperhangers
	47-3011	HelpersBrickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
	47-3012	HelpersCarpenters
	47-3016	HelpersRoofers
	47-5013	Service Unit Operators, Oil and Gas
	47-5051	Rock Splitters, Quarry
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021 53-7041	Parking Attendants Heist and Winch Operators
	53-7041 53-7061	Hoist and Winch Operators Cleaners of Vehicles and Equipment
	53-7061	Laborers and Freight, Stock, and Material Movers, Hand
	53-7002	Tank Car, Truck, and Ship Loaders
High school diploma or equivalent	11-9071	Gambling Managers
©	11-9081	Lodging Managers
	21-1094	Community Health Workers
	27-1023	Floral Designers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032	Choreographers
	27-4021	Photographers
	29-2092	Hearing Aid Specialists
	31-1120	Home Health and Personal Care Aides
	33-3011	Bailiffs
	37-3013	Tree Trimmers and Pruners
	39-1013 39-3011	First-Line Supervisors of Gambling Services Workers
	39-3011	Gambling Dealers  Locker Room, Coatroom, and Dressing Room Attendants
	39-4021	Funeral Attendants
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	43-2011	Switchboard Operators, Including Answering Service
	43-3041	Gambling Cage Workers
	43-4111	Interviewers, Except Eligibility and Loan
	45-4022	Logging Equipment Operators
	47-2022	Stonemasons
	47-2072	Pile Driver Operators
	47-2121	Glaziers
	47-2171	Reinforcing Iron and Rebar Workers
	47-5081	HelpersExtraction Workers  Machanical Door Repairers
	49-9011 51-2041	Mechanical Door Repairers Structural Metal Fabricators and Fitters
	51-2041 51-4032	Structural Metal Fabricators and Fitters  Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-4032	Shoe and Leather Workers and Repairers
	51-6042	Shoe Machine Operators and Tenders
	51-6092	Fabric and Apparel Patternmakers
	51-6099	Textile, Apparel, and Furnishings Workers, All Other
	51-7011	Cabinetmakers and Bench Carpenters
	51-7041	Sawing Machine Setters, Operators, and Tenders, Wood
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-8099	Plant and System Operators, All Other
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9111	Packaging and Filling Machine Operators and Tenders
	51-9194	Etchers and Engravers
	51-9198	HelpersProduction Workers
	53-3011	Ambulance Drivers and Attendants, Except Emergency Medical Technicians
	53-7071	Gas Compressor and Gas Pumping Station Operators
		· · · · · · · · · · · · · · · · · · ·
Some college, no degree Postsecondary nondegree award	43-4151 27-4011	Order Clerks Audio and Video Technicians

Educational Requirement	SOC Code	SOC Title
	29-2061	Licensed Practical and Licensed Vocational Nurses
	31-1131	Nursing Assistants
	31-9011	Massage Therapists
	35-2013 39-5012	Cooks, Private Household  Hairdressers, Hairstylists, and Cosmetologists
	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers
	49-2097	Audiovisual Equipment Installers and Repairers
	49-9092	Commercial Divers
	51-4111	Tool and Die Makers
	51-9162	Computer Numerically Controlled Tool Programmers
	53-5021	Captains, Mates, and Pilots of Water Vessels
	53-5031	Ship Engineers
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
	17-3028	Calibration Technologists and Technicians
	19-4013	Food Science Technicians
	27-4012	Broadcast Technicians
	29-2031 29-2033	Cardiovascular Technologists and Technicians
	29-2035 29-2035	Nuclear Medicine Technologists  Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
Bachelor's degree	11-1011	Chief Executives
	11-2011	Advertising and Promotions Managers
	11-9161	Emergency Management Directors
	17-1012	Landscape Architects
	17-1021	Cartographers and Photogrammetrists
	17-2031	Bioengineers and Biomedical Engineers
	17-2041	Chemical Engineers
	19-1011	Animal Scientists
	19-1013	Soil and Plant Scientists
	19-1023	Zoologists and Wildlife Biologists
	19-1031 19-2042	Conservation Scientists  Geographers
	19-2042 19-2043	Geoscientists, Except Hydrologists and Geographers Hydrologists
	19-2043 19-4021	Biological Technicians
	19-4061	Social Science Research Assistants
	21-2099	Religious Workers, All Other
	25-4013	Museum Technicians and Conservators
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	27-3011	Broadcast Announcers and Radio Disc Jockeys
	29-1125	Recreational Therapists
	29-1129	Therapists, All Other
	29-1141	Registered Nurses
Master's degree	33-3031 19-1041	Fish and Game Wardens Enidemiologists
iviastei s neglee	19-1041 19-3011	Epidemiologists Economists
	19-3011	Psychologists, All Other
	25-4011	Archivists
	25-4012	Curators
	29-1071	Physician Assistants
	29-1127	Speech-Language Pathologists
	29-1151	Nurse Anesthetists
	29-1161	Nurse Midwives
	29-1171	Nurse Practitioners
	29-2091	Orthotists and Prosthetists
Doctoral or professional degree	19-1021	Biochemists and Biophysicists
	23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers
	25-1011	Business Teachers, Postsecondary
	25-1053 25-1062	Environmental Science Teachers, Postsecondary  Area, Ethnic, and Cultural Studies Teachers, Postsecondary
	25-1062 25-1069	Social Sciences Teachers, Postsecondary, All Other
		Social Sciences reachers, i Ostoccontairy, All Other
		Communications Teachers Postsecondary
	25-1122	Communications Teachers, Postsecondary  Recreation and Fitness Studies Teachers, Postsecondary
	25-1122 25-1193	Recreation and Fitness Studies Teachers, Postsecondary
	25-1122 25-1193 25-1199	Recreation and Fitness Studies Teachers, Postsecondary Postsecondary Teachers, All Other
	25-1122 25-1193 25-1199 29-1022	Recreation and Fitness Studies Teachers, Postsecondary Postsecondary Teachers, All Other Oral and Maxillofacial Surgeons
	25-1122 25-1193 25-1199	Recreation and Fitness Studies Teachers, Postsecondary Postsecondary Teachers, All Other
	25-1122 25-1193 25-1199 29-1022 29-1029	Recreation and Fitness Studies Teachers, Postsecondary Postsecondary Teachers, All Other Oral and Maxillofacial Surgeons Dentists, All Other Specialists

ducational Requirement	SOC Code	SOC Title
No formal educational credential	33-9091	Crossing Guards and Flaggers
	35-3041	Food Servers, Nonrestaurant
	37-2019	Building Cleaning Workers, All Other
	39-3021	Motion Picture Projectionists
	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	47-2082	Tapers
	47-3011	HelpersBrickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
	47-3012	HelpersCarpenters
	47-3016	HelpersRoofers
	51-3021	Butchers and Meat Cutters
	51-3099	Food Processing Workers, All Other
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
	53-7061	Cleaners of Vehicles and Equipment
	53-7062	Laborers and Freight, Stock, and Material Movers, Hand
High school diploma or equivalent	11-9081	Lodging Managers
	11-9179	Personal Service Managers, All Other
	21-1094	Community Health Workers
	27-1023	Floral Designers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032	Choreographers
	27-2091	Disc Jockeys, Except Radio
	27-4021	Photographers
	29-2092	Hearing Aid Specialists
	31-1120	Home Health and Personal Care Aides
	33-3011	Bailiffs
	33-9021	Private Detectives and Investigators
	37-3013	Tree Trimmers and Pruners
	39-2011	Animal Trainers
	39-3093	Locker Room, Coatroom, and Dressing Room Attendants
	39-4021	Funeral Attendants
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	43-2011	Switchboard Operators, Including Answering Service
	43-3041	Gambling Cage Workers
	43-4111	Interviewers, Except Eligibility and Loan
	43-4121	Library Assistants, Clerical
	43-5041	Meter Readers, Utilities
	45-4022	Logging Equipment Operators
	47-2171	Reinforcing Iron and Rebar Workers
	47-5023	Earth Drillers, Except Oil and Gas
	49-9011	Mechanical Door Repairers
	49-9044	Millwrights
	51-2041	Structural Metal Fabricators and Fitters
	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-6092	Fabric and Apparel Patternmakers
	51-7011	Cabinetmakers and Bench Carpenters
	51-8012	Power Distributors and Dispatchers
	51-8091	Chemical Plant and System Operators
	51-9011	Chemical Equipment Operators and Tenders
	51-9011	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9071	Jewelers and Precious Stone and Metal Workers
	51-9081	Dental Laboratory Technicians
	51-9081	Packaging and Filling Machine Operators and Tenders
	51-9111	HelpersProduction Workers
	43-4151	Order Clerks
Some college no degree		Court Reporters and Simultaneous Captioners
Some college, no degree		court reporters and simultaneous captioners
Some college, no degree Postsecondary nondegree award	27-3092	Audio and Vidoo Tochnicians
	27-4011	Audio and Video Technicians
	27-4011 29-2061	Licensed Practical and Licensed Vocational Nurses
	27-4011 29-2061 31-1131	Licensed Practical and Licensed Vocational Nurses Nursing Assistants
	27-4011 29-2061 31-1131 31-9011	Licensed Practical and Licensed Vocational Nurses Nursing Assistants Massage Therapists
	27-4011 29-2061 31-1131 31-9011 35-2013	Licensed Practical and Licensed Vocational Nurses Nursing Assistants Massage Therapists Cooks, Private Household
	27-4011 29-2061 31-1131 31-9011	Licensed Practical and Licensed Vocational Nurses Nursing Assistants Massage Therapists

### Workforce Region 16 - Occupational Areas of Concern by Educational Requirement

Educational Requirement	SOC Code	SOC Title
	49-2097	Audiovisual Equipment Installers and Repairers
	53-2012	Commercial Pilots
	53-5021	Captains, Mates, and Pilots of Water Vessels
	53-5031	Ship Engineers
Associate's degree	17-3022	Civil Engineering Technologists and Technicians
	17-3025	Environmental Engineering Technologists and Technicians
	19-4031	Chemical Technicians
	19-4099	Life, Physical, and Social Science Technicians, All Other
	23-2099	Legal Support Workers, All Other
	25-2011	Preschool Teachers, Except Special Education
	29-2031	Cardiovascular Technologists and Technicians
	29-2033	Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
	39-4031	Morticians, Undertakers, and Funeral Arrangers
Bachelor's degree	11-1011	Chief Executives
	11-3061	Purchasing Managers
	11-3131	Training and Development Managers
	11-9039	Education Administrators, All Other
	11-9072	Entertainment and Recreation Managers, Except Gambling
	13-2041	Credit Analysts
	13-2054	Financial Risk Specialists
	13-2081	Tax Examiners and Collectors, and Revenue Agents
	17-2061	Computer Hardware Engineers
	19-4021	Biological Technicians
	19-4061	Social Science Research Assistants
	19-4092	Forensic Science Technicians
	21-2099	Religious Workers, All Other
	25-2021	Elementary School Teachers, Except Special Education
	25-4013	Museum Technicians and Conservators
	25-9099	Educational Instruction and Library Workers, All Other
	27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators
	27-1021	Commercial and Industrial Designers
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	27-2041	Music Directors and Composers
	27-3041	Editors
	27-3042	Technical Writers
	27-4031	Camera Operators, Television, Video, and Film
	29-1125	Recreational Therapists
	29-1129	Therapists, All Other
	29-1141	Registered Nurses
	53-2011	Airline Pilots, Copilots, and Flight Engineers
Master's degree	15-1221	Computer and Information Research Scientists
-	19-3039	Psychologists, All Other
	25-4011	Archivists
	25-9021	Farm and Home Management Educators
	29-1071	Physician Assistants
	29-1127	Speech-Language Pathologists
	29-1151	Nurse Anesthetists
	29-1171	Nurse Practitioners
	29-9091	Athletic Trainers
Doctoral or professional degree	25-1011	Business Teachers, Postsecondary
	25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary
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	25-1069 25-1122 25-1193 25-1199 29-1081 29-1215	Social Sciences Teachers, Postsecondary, All Other Communications Teachers, Postsecondary Recreation and Fitness Studies Teachers, Postsecondary Postsecondary Teachers, All Other Podiatrists Family Medicine Physicians

ucational Requirement	SOC Code	SOC Title
No formal educational credential	33-9091	Crossing Guards and Flaggers
	35-2019	Cooks, All Other
	35-3041	Food Servers, Nonrestaurant
	37-2019	Building Cleaning Workers, All Other
	39-3021	Motion Picture Projectionists
	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	39-5093	Shampooers
	41-9011	Demonstrators and Product Promoters
	45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals
	45-2099	Agricultural Workers, All Other
	47-2041	Carpet Installers
	47-2082	Tapers
	47-3011	HelpersBrickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
	47-3012	HelpersCarpenters
	47-3016	HelpersRoofers
	47-5012	Rotary Drill Operators, Oil and Gas
	47-5013	Service Unit Operators, Oil and Gas
	47-5041	Continuous Mining Machine Operators
	51-3021	Butchers and Meat Cutters
	51-6021	Pressers, Textile, Garment, and Related Materials
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
	53-7041	Hoist and Winch Operators
	53-7061	Cleaners of Vehicles and Equipment
	53-7062	Laborers and Freight, Stock, and Material Movers, Hand
ligh school diploma or equivalent	11-9051	Food Service Managers
	11-9081	Lodging Managers
	19-5012	Occupational Health and Safety Technicians
	21-1094	Community Health Workers
	27-1023	Floral Designers
	27-2032	Choreographers
	27-4021	Photographers
	29-2092	Hearing Aid Specialists
	31-1120	Home Health and Personal Care Aides
	31-1133	Psychiatric Aides
	31-2012	Occupational Therapy Aides
	33-1099	First-Line Supervisors of Protective Service Workers, All Other
	33-3011	Bailiffs
	33-3052	Transit and Railroad Police
	33-9021	Private Detectives and Investigators
	37-3013	Tree Trimmers and Pruners
	39-3011	Gambling Dealers
	39-3093	Locker Room, Coatroom, and Dressing Room Attendants
	39-4021	Funeral Attendants
	39-6011	Baggage Porters and Bellhops
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	43-2011	Switchboard Operators, Including Answering Service
	43-3021	Billing and Posting Clerks
	43-3041	Gambling Cage Workers
	43-4011	Brokerage Clerks
	43-4111	Interviewers, Except Eligibility and Loan
	43-5041	Meter Readers, Utilities
	43-9022	Word Processors and Typists
	43-9071	Office Machine Operators, Except Computer
	47-2011	Boilermakers
	47-2121	Glaziers
	47-2171	Reinforcing Iron and Rebar Workers
	47-4071	Septic Tank Servicers and Sewer Pipe Cleaners
	47-5023	Earth Drillers, Except Oil and Gas
	49-3041	Farm Equipment Mechanics and Service Technicians
	49-3043	Rail Car Repairers
	49-3092	Recreational Vehicle Service Technicians
	49-9011	Mechanical Door Repairers
	49-9061	Camera and Photographic Equipment Repairers
	51-2031	Engine and Other Machine Assemblers
	51-2041	Structural Metal Fabricators and Fitters
	51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic
	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic
	51-6092	Fabric and Apparel Patternmakers
	51-6093	Upholsterers
	51-7011	Cabinetmakers and Bench Carpenters
	51-7021	Furniture Finishers
	51-7041	Sawing Machine Setters, Operators, and Tenders, Wood
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-8092	Gas Plant Operators
	51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers
	51-8099	Plant and System Operators, All Other
		Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders
	51-9021	
	51-9021 51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
		Mixing and Blending Machine Setters, Operators, and Tenders Packaging and Filling Machine Operators and Tenders
	51-9023	
	51-9023 51-9111	Packaging and Filling Machine Operators and Tenders
	51-9023 51-9111 51-9193	Packaging and Filling Machine Operators and Tenders Cooling and Freezing Equipment Operators and Tenders

Workforce Region 17 - Occupational Areas of Concern by Educational Requirement

ucational Requirement	SOC Code	SOC Title
	53-4031	Railroad Conductors and Yardmasters
Sama sallaga na dagnas	53-4041	Subway and Streetcar Operators
Some college, no degree Postsecondary nondegree award	43-4151 27-4011	Order Clerks Audio and Video Technicians
rostsecondary nondegree award	29-2061	Licensed Practical and Licensed Vocational Nurses
	29-9099	Healthcare Practitioners and Technical Workers, All Other
	31-1131	Nursing Assistants
	31-9011	Massage Therapists
	35-2013	Cooks, Private Household
	39-5011	Barbers
	39-5012	Hairdressers, Hairstylists, and Cosmetologists
	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers
	49-2097	Audiovisual Equipment Installers and Repairers
	49-3052	Motorcycle Mechanics
	51-4111	Tool and Die Makers
	51-5111	Prepress Technicians and Workers
At-A-Id	53-5031	Ship Engineers
Associate's degree	17-3019	Drafters, All Other Civil Engineering Technologists and Technicians
	17-3022 17-3025	Civil Engineering Technologists and Technicians Environmental Engineering Technologists and Technicians
	17-3023	Calibration Technologists and Technicians
	19-4031	Chemical Technicians
	19-4044	Hydrologic Technicians
	25-2011	Preschool Teachers, Except Special Education
	29-1124	Radiation Therapists
	29-2031	Cardiovascular Technologists and Technicians
	29-2033	Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
Bachelor's degree	11-1011	Chief Executives
	11-2011	Advertising and Promotions Managers
	11-3111	Compensation and Benefits Managers
	11-9039	Education Administrators, All Other
	11-9041	Architectural and Engineering Managers
	11-9121	Natural Sciences Managers
	11-9161	Emergency Management Directors  Macting Convention and Event Planners
	13-1121 13-2081	Meeting, Convention, and Event Planners Tax Examiners and Collectors, and Revenue Agents
	17-1012	Tax Examiners and Collectors, and Revenue Agents  Landscape Architects
	17-2081	Environmental Engineers
	17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors
	17-2131	Materials Engineers
	17-2151	Mining and Geological Engineers, Including Mining Safety Engineers
	19-1012	Food Scientists and Technologists
	19-1023	Zoologists and Wildlife Biologists
	19-1029	Biological Scientists, All Other
	19-1031	Conservation Scientists
	19-4021	Biological Technicians
	21-2099	Religious Workers, All Other
	25-2021	Elementary School Teachers, Except Special Education
	27-1014	Special Effects Artists and Animators
	27-1027	Set and Exhibit Designers
	27-1029 27-2041	Designers, All Other  Music Directors and Composers
	27-2041	Interpreters and Translators
	27-4031	Camera Operators, Television, Video, and Film
	27-4032	Film and Video Editors
	29-1125	Recreational Therapists
	29-1128	Exercise Physiologists
	29-1129	Therapists, All Other
	29-1141	Registered Nurses
	41-9031	Sales Engineers
Master's degree	15-1221	Computer and Information Research Scientists
	19-3039	Psychologists, All Other
	19-3051	Urban and Regional Planners
	25-4011	Archivists
	25-4012	Curators
	29-1071	Physician Assistants
	29-1127	Speech-Language Pathologists
	29-1151	Nurse Anesthetists
Doctoral or professional decree	29-1171	Nurse Practitioners
Doctoral or professional degree	23-1023	Judges, Magistrate Judges, and Magistrates
	25-1011 25-1053	Business Teachers, Postsecondary Environmental Science Teachers, Postsecondary
	25-1053	Area, Ethnic, and Cultural Studies Teachers, Postsecondary
	25-1062	Social Sciences Teachers, Postsecondary, All Other
	25-1069	Communications Teachers, Postsecondary
	25-1122	Recreation and Fitness Studies Teachers, Postsecondary
	25-1199	Postsecondary Teachers, All Other
	29-1215	Family Medicine Physicians
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icational Requirement	SOC Code	SOC Title
No formal educational credential	27-2031	Dancers
	35-2019	Cooks, All Other
	35-3041 37-2019	Food Servers, Nonrestaurant Building Cleaning Workers, All Other
	39-3021	Motion Picture Projectionists
	39-3021	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	47-3011	HelpersBrickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
	47-3012	HelpersCarpenters
	47-3016	HelpersRoofers
	47-5012	Rotary Drill Operators, Oil and Gas
	47-5013	Service Unit Operators, Oil and Gas
	51-3023	Slaughterers and Meat Packers
	51-6052	Tailors, Dressmakers, and Custom Sewers
	51-9022	Grinding and Polishing Workers, Hand
	51-9123	Painting, Coating, and Decorating Workers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
	53-7061	Cleaners of Vehicles and Equipment
	53-7062	Laborers and Freight, Stock, and Material Movers, Hand
	53-7199	Material Moving Workers, All Other
igh school diploma or equivalent	11-9013	Farmers, Ranchers, and Other Agricultural Managers
	11-9071	Gambling Managers
	11-9081	Lodging Managers
	21-1094	Community Health Workers
	27-1023	Floral Designers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032	Choreographers
	27-4021	Photographers
	29-2092	Hearing Aid Specialists
	31-1120	Home Health and Personal Care Aides
	31-1133	Psychiatric Aides
	31-2022	Physical Therapist Aides
	33-1099	First-Line Supervisors of Protective Service Workers, All Other
	33-3011	Bailiffs Transit and Bailread Balica
	33-3052	Transit and Railroad Police
	33-9021 37-3013	Private Detectives and Investigators
	39-3011	Tree Trimmers and Pruners
	39-3011	Gambling Dealers Locker Room Costroom and Drossing Room Attendants
	39-4021	Locker Room, Coatroom, and Dressing Room Attendants Funeral Attendants
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	43-2011	Switchboard Operators, Including Answering Service
	43-3041	Gambling Cage Workers
	43-4111	Interviewers, Except Eligibility and Loan
	43-5041	Meter Readers, Utilities
	43-9022	Word Processors and Typists
	43-9071	Office Machine Operators, Except Computer
	45-4011	Forest and Conservation Workers
	45-4021	Fallers
	47-2011	Boilermakers
	47-2121	Glaziers
	47-2171	Reinforcing Iron and Rebar Workers
	47-2231	Solar Photovoltaic Installers
	47-4071	Septic Tank Servicers and Sewer Pipe Cleaners
	47-5023	Earth Drillers, Except Oil and Gas
	47-5081	HelpersExtraction Workers
	49-2092	Electric Motor, Power Tool, and Related Repairers
	49-3041	Farm Equipment Mechanics and Service Technicians
	49-9011	Mechanical Door Repairers
	49-9061	Camera and Photographic Equipment Repairers
	49-9094	Locksmiths and Safe Repairers
	49-9096	Riggers
	51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers
	51-2041	Structural Metal Fabricators and Fitters
	51-3093	Food Cooking Machine Operators and Tenders  Foreign Machine Setters Operators and Tenders Metal and Plactic
	51-4022 51 4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic
	51-4032 51 4025	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic
	51-4061	Model Makers, Metal and Plastic
	51-6092 51-6092	Fabric and Apparel Patternmakers
	51-6093 51-7011	Upholsterers Cabinetmakers and Bench Carpenters
	51-7011	Woodworkers, All Other
	51-7099 51-8091	Chemical Plant and System Operators
	51-8091 51-9012	Chemical Plant and System Operators  Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tende
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders

Workforce Region 18 - Occupational Areas of Concern by Educational Requirement

ducational Requirement	SOC Code	SOC Title
	51-9194	Etchers and Engravers
	51-9196	Paper Goods Machine Setters, Operators, and Tenders
	51-9198	HelpersProduction Workers
	53-2022	Airfield Operations Specialists
	53-2031 53-6061	Flight Attendants
	53-7072	Passenger Attendants Pump Operators, Except Wellhead Pumpers
Some college, no degree	43-4151	Order Clerks
Postsecondary nondegree award	27-3092	Court Reporters and Simultaneous Captioners
rostsecondary nondegree award	27-4011	Audio and Video Technicians
	29-2061	Licensed Practical and Licensed Vocational Nurses
	31-1131	Nursing Assistants
	31-9011	Massage Therapists
	35-2013	Cooks, Private Household
	39-5012	Hairdressers, Hairstylists, and Cosmetologists
	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers
	49-2097	Audiovisual Equipment Installers and Repairers
	49-3052	Motorcycle Mechanics
	51-4111	Tool and Die Makers
	51-5111	Prepress Technicians and Workers
	53-5021	Captains, Mates, and Pilots of Water Vessels
	53-5031	Ship Engineers
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
-	19-4031	Chemical Technicians
	23-2099	Legal Support Workers, All Other
	25-2011	Preschool Teachers, Except Special Education
	27-4012	Broadcast Technicians
	29-1124	Radiation Therapists
	29-2031	Cardiovascular Technologists and Technicians
	29-2033	Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
	39-4031	Morticians, Undertakers, and Funeral Arrangers
	49-2091	Avionics Technicians
Bachelor's degree	11-1011	Chief Executives
	11-2011	Advertising and Promotions Managers
	11-2033	Fundraising Managers
	11-9041	Architectural and Engineering Managers
	13-1075	Labor Relations Specialists
	17-1012	Landscape Architects
	17-2031	Bioengineers and Biomedical Engineers
	17-2081	Environmental Engineers
	17-2151	Mining and Geological Engineers, Including Mining Safety Engineers
	19-1023	Zoologists and Wildlife Biologists
	19-2031	Chemists
	19-4021	Biological Technicians
	21-2099	Religious Workers, All Other
	25-2021	Elementary School Teachers, Except Special Education
	25-4013	Museum Technicians and Conservators
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	27-2041	Music Directors and Composers
	27-3011	Broadcast Announcers and Radio Disc Jockeys
	29-1125	Recreational Therapists Therapists All Other
	29-1129	Therapists, All Other
	29-1141	Registered Nurses
	41-9031 52 2011	Sales Engineers Airling Bilate Copilate and Elight Engineers
Master's degree	53-2011 19-3039	Airline Pilots, Copilots, and Flight Engineers Psychologists, All Other
master suegree	25-4011	Archivists
	25-4011 25-4012	Curators
	29-1071	Physician Assistants
	29-10/1 29-1127	Speech-Language Pathologists
	29-1127	Nurse Anesthetists
	29-1151	Nurse Practitioners
Doctoral or professional degree	23-1023	Judges, Magistrate Judges, and Magistrates
Postoral or professional degree	25-1023	Business Teachers, Postsecondary
	25-1011	Area, Ethnic, and Cultural Studies Teachers, Postsecondary
		Social Sciences Teachers Postsecondary All Other
	25-1069	Social Sciences Teachers, Postsecondary, All Other Communications Teachers, Postsecondary
	25-1069 25-1122	Communications Teachers, Postsecondary
	25-1069 25-1122 25-1193	Communications Teachers, Postsecondary Recreation and Fitness Studies Teachers, Postsecondary
	25-1069 25-1122 25-1193 25-1199	Communications Teachers, Postsecondary Recreation and Fitness Studies Teachers, Postsecondary Postsecondary Teachers, All Other
	25-1069 25-1122 25-1193 25-1199 29-1181	Communications Teachers, Postsecondary Recreation and Fitness Studies Teachers, Postsecondary Postsecondary Teachers, All Other Audiologists
	25-1069 25-1122 25-1193 25-1199	Communications Teachers, Postsecondary Recreation and Fitness Studies Teachers, Postsecondary Postsecondary Teachers, All Other

### Workforce Region 19 - Occupational Areas of Concern by Educational Requirement

ducational Requirement	SOC Code	SOC Title
No formal educational credential	37-2019	Building Cleaning Workers, All Other
	41-9011	Demonstrators and Product Promoters
	47-3016	HelpersRoofers
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
High school diploma or equivalent	21-1094	Community Health Workers
	27-4021	Photographers
	33-3011	Bailiffs
	37-3013	Tree Trimmers and Pruners
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	47-2171	Reinforcing Iron and Rebar Workers
	51-2041	Structural Metal Fabricators and Fitters
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
Postsecondary nondegree award	35-2013	Cooks, Private Household
	49-2097	Audiovisual Equipment Installers and Repairers
Associate's degree	29-2051	Dietetic Technicians
Bachelor's degree	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	29-1129	Therapists, All Other
Master's degree	19-3039	Psychologists, All Other
	25-4011	Archivists
Doctoral or professional degree	25-1011	Business Teachers, Postsecondary
	25-1069	Social Sciences Teachers, Postsecondary, All Other
	25-1122	Communications Teachers, Postsecondary
	25-1199	Postsecondary Teachers, All Other

lucational Requirement	SOC Code	SOC Title
No formal educational credential	33-9091	Crossing Guards and Flaggers
	35-3041	Food Servers, Nonrestaurant
	37-2019	Building Cleaning Workers, All Other
	39-3021	Motion Picture Projectionists
	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals
	47-2041	Carpet Installers
	47-3011 47-2016	Helpers Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
	47-3016	HelpersRoofers
	47-5013 51-3099	Service Unit Operators, Oil and Gas
	51-3099 51-6052	Food Processing Workers, All Other Tailors, Drossmakers, and Custom Sources
	51-9032	Tailors, Dressmakers, and Custom Sewers Cutters and Trimmers, Hand
	53-5011	Sailors and Marine Oilers
	53-6021	
	53-6021	Parking Attendants Cleaners of Vehicles and Equipment
	53-7061	Laborers and Freight, Stock, and Material Movers, Hand
High school diploma or equivalent	11-9081	Lodging Managers
	21-1094	Community Health Workers
	27-1023	Floral Designers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032	Choreographers
	27-4021	Photographers
	29-2092	Hearing Aid Specialists
	31-1120	Home Health and Personal Care Aides
	33-3011	Bailiffs
	37-3013	Tree Trimmers and Pruners
	39-3011	Gambling Dealers
	39-3093	Locker Room, Coatroom, and Dressing Room Attendants
	39-4021	Funeral Attendants
	39-6011	Baggage Porters and Bellhops
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	43-2011	Switchboard Operators, Including Answering Service
	43-3099	Financial Clerks, All Other
	43-4011	Brokerage Clerks
	43-4111	Interviewers, Except Eligibility and Loan
	47-2121	Glaziers
	47-2171	Reinforcing Iron and Rebar Workers
	49-9011	Mechanical Door Repairers
	49-9012	Control and Valve Installers and Repairers, Except Mechanical Door
	49-9043	Maintenance Workers, Machinery
	49-9061	Camera and Photographic Equipment Repairers
	49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers
	51-2041	Structural Metal Fabricators and Fitters
	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-4192	Layout Workers, Metal and Plastic
	51-4194	Tool Grinders, Filers, and Sharpeners
	51-6092	Fabric and Apparel Patternmakers
	51-6093	Upholsterers
	51-7011	Cabinetmakers and Bench Carpenters
	51-7041	Sawing Machine Setters, Operators, and Tenders, Wood
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9081	Dental Laboratory Technicians
	51-9111	Packaging and Filling Machine Operators and Tenders
	51-9198	HelpersProduction Workers
	53-4041	Subway and Streetcar Operators
	53-6041	Traffic Technicians
Some college, no degree	43-4151	Order Clerks
Some college, no degree Postsecondary nondegree award	43-4151 27-3092 27-4011	Order Clerks Court Reporters and Simultaneous Captioners Audio and Video Technicians

### Workforce Region 20 - Occupational Areas of Concern by Educational Requirement

ducational Requirement	SOC Code	SOC Title
	31-1131	Nursing Assistants
	31-9011	Massage Therapists
	35-2013	Cooks, Private Household
	39-5012	Hairdressers, Hairstylists, and Cosmetologists
	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers
	49-2097	Audiovisual Equipment Installers and Repairers
	51-4111	Tool and Die Makers
	53-5021	Captains, Mates, and Pilots of Water Vessels
	53-5031	Ship Engineers
Associate's degree	17-3026	Industrial Engineering Technologists and Technicians
•	19-4031	Chemical Technicians
	25-2011	Preschool Teachers, Except Special Education
	29-2031	Cardiovascular Technologists and Technicians
	29-2033	Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
	39-4031	Morticians, Undertakers, and Funeral Arrangers
	49-2091	Avionics Technicians
Bachelor's degree	11-1011	Chief Executives
buchelor 5 degree	11-3131	Training and Development Managers
	11-9039	Education Administrators, All Other
	11-9033	Architectural and Engineering Managers
	13-2061	Financial Examiners
	13-2001	Tax Examiners and Collectors, and Revenue Agents
	17-1012	Landscape Architects
	19-1012	·
		Zoologists and Wildlife Biologists Conservation Scientists
	19-1031	
	19-4021	Biological Technicians
	25-2021	Elementary School Teachers, Except Special Education
	25-9099	Educational Instruction and Library Workers, All Other
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	27-4032	Film and Video Editors
	29-1125	Recreational Therapists
	29-1129	Therapists, All Other
	29-1141	Registered Nurses
Master's degree	15-1221	Computer and Information Research Scientists
	19-3039	Psychologists, All Other
	25-4011	Archivists
	25-4012	Curators
	29-1071	Physician Assistants
	29-1127	Speech-Language Pathologists
	29-1151	Nurse Anesthetists
	29-1171	Nurse Practitioners
	29-9091	Athletic Trainers
Doctoral or professional degree	23-1023	Judges, Magistrate Judges, and Magistrates
	25-1011	Business Teachers, Postsecondary
	25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary
	25-1069	Social Sciences Teachers, Postsecondary, All Other
	25-1122	Communications Teachers, Postsecondary
	25-1193	Recreation and Fitness Studies Teachers, Postsecondary
	25-1199	Postsecondary Teachers, All Other
	29-1215	Family Medicine Physicians

ucational Requirement	SOC Code	SOC Title
No formal educational credential	27-1019	Artists and Related Workers, All Other
	27-2031	Dancers Newschargest
	35-3041 37-2019	Food Servers, Nonrestaurant  Building Cleaning Workers, All Other
	37-2019 37-3019	Building Cleaning Workers, All Other Grounds Maintenance Workers, All Other
	39-3021	Motion Picture Projectionists
	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	41-9012	Models
	47-3016	HelpersRoofers
	47-5013 47-5051	Service Unit Operators, Oil and Gas Rock Splitters, Quarry
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
	53-7041	Hoist and Winch Operators
High school diploma or equivalent	11-9071	Gambling Managers
	21-1094	Community Health Workers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032 27-4021	Choreographers Photographers
	29-2092	Hearing Aid Specialists
	31-1120	Home Health and Personal Care Aides
	33-3011	Bailiffs
	37-3013	Tree Trimmers and Pruners
	39-3011	Gambling Dealers
	39-3093	Locker Room, Coatroom, and Dressing Room Attendants
	39-4021 39-6012	Funeral Attendants Concierges
	39-6012 39-7010	Concierges Tour and Travel Guides
	39-9041	Residential Advisors
	43-2011	Switchboard Operators, Including Answering Service
	43-2021	Telephone Operators
	43-3041	Gambling Cage Workers
	43-4111	Interviewers, Except Eligibility and Loan
	47-2171	Reinforcing Iron and Rebar Workers
	49-9011 51-2041	Mechanical Door Repairers Structural Metal Fabricators and Fitters
	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-6092	Fabric and Apparel Patternmakers
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9111	Packaging and Filling Machine Operators and Tenders
	51-9194	Etchers and Engravers
Bt	53-4011	Locomotive Engineers
Postsecondary nondegree award	31-1131 35-2013	Nursing Assistants Cooks, Private Household
	39-5012	Hairdressers, Hairstylists, and Cosmetologists
	49-2097	Audiovisual Equipment Installers and Repairers
	51-4111	Tool and Die Makers
	53-5021	Captains, Mates, and Pilots of Water Vessels
	53-5031	Ship Engineers
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
	27-4012	Broadcast Technicians
	29-2033	Nuclear Medicine Technologists  Magnetic Resonance Imaging Technologists
	29-2035 29-2051	Magnetic Resonance Imaging Technologists Dietetic Technicians
Bachelor's degree	11-1011	Chief Executives
<b>3</b>	11-2011	Advertising and Promotions Managers
	17-1012	Landscape Architects
	17-2031	Bioengineers and Biomedical Engineers
	17-2171	Petroleum Engineers
	19-1023	Zoologists and Wildlife Biologists  Goographers
	19-2042	Geoscientists, Except Hydrologists and Geographers
	19-4021 21-2099	Biological Technicians Religious Workers, All Other
	25-4013	Museum Technicians and Conservators
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	27-3011	Broadcast Announcers and Radio Disc Jockeys
	29-1129	Therapists, All Other
	29-1141	Registered Nurses
Master's degree	19-3039	Psychologists, All Other
	19-3094 25-4011	Political Scientists Archivists
	25-4011 25-4012	Archivists Curators
	29-1071	Physician Assistants
	29-1151	Nurse Anesthetists
	29-1171	Nurse Practitioners
Doctoral or professional degree	25-1011	Business Teachers, Postsecondary
	25-1031	Architecture Teachers, Postsecondary
	25-1053	Environmental Science Teachers, Postsecondary
	25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary
	25-1069	Social Sciences Teachers, Postsecondary, All Other
	25-1122 25-1193	Communications Teachers, Postsecondary Recreation and Fitness Studies Teachers, Postsecondary
	25-1193 25-1199	Postsecondary Teachers, All Other
	29-1181	Audiologists

ducational Requirement	SOC Code	SOC Title Artists and Polated Workers All Others
No formal educational credential	27-1019 27-2031	Artists and Related Workers, All Other Dancers
	27-2031 37-2019	Building Cleaning Workers, All Other
	37-2019	Grounds Maintenance Workers, All Other
	39-3021	Motion Picture Projectionists
	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	41-9012	Models
	47-3016	HelpersRoofers
	47-5013	Service Unit Operators, Oil and Gas
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
	53-7041	Hoist and Winch Operators
High school diploma or equivalent	11-9071	Gambling Managers
	21-1094	Community Health Workers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032	Choreographers
	27-4021	Photographers
	29-2092	Hearing Aid Specialists
	31-1120	Home Health and Personal Care Aides Bailiffs
	33-3011	Tree Trimmers and Pruners
	37-3013 39-3011	Gambling Dealers
	39-3011	Locker Room, Coatroom, and Dressing Room Attendants
	39-4021	Funeral Attendants
	39-6012	Concierges
	39-7010	Tour and Travel Guides
	39-9041	Residential Advisors
	41-3041	Travel Agents
	43-2011	Switchboard Operators, Including Answering Service
	43-3041	Gambling Cage Workers
	47-2171	Reinforcing Iron and Rebar Workers
	47-5081	HelpersExtraction Workers
	49-9011	Mechanical Door Repairers
	51-2041	Structural Metal Fabricators and Fitters
	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-6092	Fabric and Apparel Patternmakers
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
Postsecondary nondegree award	51-9194 29-2061	Etchers and Engravers Licensed Practical and Licensed Vocational Nurses
rostsecondary nondegree award	31-1131	Nursing Assistants
	35-2013	Cooks, Private Household
	49-2097	Audiovisual Equipment Installers and Repairers
	53-5031	Ship Engineers
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
	27-4012	Broadcast Technicians
	29-2031	Cardiovascular Technologists and Technicians
	29-2033	Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
Bachelor's degree	17-2031	Bioengineers and Biomedical Engineers
	19-1023	Zoologists and Wildlife Biologists
	19-2042	Geoscientists, Except Hydrologists and Geographers
	19-4021	Biological Technicians
	25-4013	Museum Technicians and Conservators
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other  Recorders: Appropriate and Radio Dice Joskovs
	27-3011 29-1125	Broadcast Announcers and Radio Disc Jockeys
		Recreational Therapists Therapists, All Other
		DIFFOURS AND THE
	29-1129 29-1141	
Master's degree	29-1141	Registered Nurses
Master's degree	29-1141 19-3039	Registered Nurses Psychologists, All Other
Master's degree	29-1141 19-3039 19-3094	Registered Nurses Psychologists, All Other Political Scientists
Master's degree	29-1141 19-3039 19-3094 25-4011	Registered Nurses Psychologists, All Other Political Scientists Archivists
Master's degree	29-1141 19-3039 19-3094 25-4011 25-4012	Registered Nurses Psychologists, All Other Political Scientists Archivists Curators
Master's degree	29-1141 19-3039 19-3094 25-4011	Registered Nurses Psychologists, All Other Political Scientists Archivists
Master's degree	29-1141 19-3039 19-3094 25-4011 25-4012 29-1071	Registered Nurses Psychologists, All Other Political Scientists Archivists Curators Physician Assistants
·	29-1141 19-3039 19-3094 25-4011 25-4012 29-1071 29-1151 29-1171	Registered Nurses Psychologists, All Other Political Scientists Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners
Master's degree  Doctoral or professional degree	29-1141 19-3039 19-3094 25-4011 25-4012 29-1071 29-1151 29-1171 25-1011	Registered Nurses Psychologists, All Other Political Scientists Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners Business Teachers, Postsecondary
·	29-1141 19-3039 19-3094 25-4011 25-4012 29-1071 29-1151 29-1171	Registered Nurses Psychologists, All Other Political Scientists Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners
•	29-1141 19-3039 19-3094 25-4011 25-4012 29-1071 29-1151 29-1171 25-1011 25-1053	Registered Nurses Psychologists, All Other Political Scientists Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners Business Teachers, Postsecondary Environmental Science Teachers, Postsecondary
•	29-1141 19-3039 19-3094 25-4011 25-4012 29-1071 29-1151 29-1171 25-1011 25-1053 25-1062	Registered Nurses Psychologists, All Other Political Scientists Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners Business Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary
	29-1141 19-3039 19-3094 25-4011 25-4012 29-1071 29-1151 29-1171 25-1011 25-1053 25-1062 25-1069	Registered Nurses Psychologists, All Other Political Scientists Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners Business Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other
	29-1141 19-3039 19-3094 25-4011 25-4012 29-1071 29-1151 29-1171 25-1011 25-1053 25-1062 25-1069 25-1122	Registered Nurses Psychologists, All Other Political Scientists Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners Business Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other Communications Teachers, Postsecondary
•	29-1141 19-3039 19-3094 25-4011 25-4012 29-1071 29-1151 29-1171 25-1011 25-1053 25-1062 25-1069 25-1122 25-1193	Registered Nurses Psychologists, All Other Political Scientists Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners Business Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other Communications Teachers, Postsecondary Recreation and Fitness Studies Teachers, Postsecondary

Workforce Region 23 - Occupational Areas of Concern by Educational Requirement

ducational Requirement	SOC Code	SOC Title
No formal educational credential	27-1019 27-2021	Artists and Related Workers, All Other
	27-2031 37-2019	Dancers Building Cleaning Workers, All Other
	37-3019	Grounds Maintenance Workers, All Other
	39-3021	Motion Picture Projectionists
	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	41-9011	Demonstrators and Product Promoters
	47-3016 47-5013	HelpersRoofers Service Unit Operators, Oil and Gas
	47-5013 47-5051	Rock Splitters, Quarry
	51-6052	Tailors, Dressmakers, and Custom Sewers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
High school diploms or assistated	53-7041 11-9071	Hoist and Winch Operators
High school diploma or equivalent	11-90/1 21-1094	Gambling Managers Community Health Workers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032	Choreographers
	27-4021	Photographers
	29-2092	Hearing Aid Specialists
	31-1120 33-3011	Home Health and Personal Care Aides Bailiffs
	33-3011	Tree Trimmers and Pruners
	39-3011	Gambling Dealers
	39-3093	Locker Room, Coatroom, and Dressing Room Attendants
	39-4021	Funeral Attendants
	39-6012	Concierges Tour and Travel Guides
	39-7010 39-9041	Tour and Travel Guides Residential Advisors
	41-3041	Travel Agents
	43-2011	Switchboard Operators, Including Answering Service
	43-3041	Gambling Cage Workers
	45-4023	Log Graders and Scalers
	45-4029 47-2171	Logging Workers, All Other  Reinforcing Iron and Rehar Workers
	47-2171 47-5081	Reinforcing Iron and Rebar Workers HelpersExtraction Workers
	49-9011	Mechanical Door Repairers
	51-2041	Structural Metal Fabricators and Fitters
	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
	51-6092	Fabric and Apparel Patternmakers
	51-7099 51-8091	Woodworkers, All Other Chemical Plant and System Operators
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9194	Etchers and Engravers
	53-4011	Locomotive Engineers
Postsecondary nondegree award	29-2061	Licensed Practical and Licensed Vocational Nurses
	31-1131 35-2013	Nursing Assistants Cooks, Private Household
	35-2013 49-2097	Audiovisual Equipment Installers and Repairers
	51-4111	Tool and Die Makers
	53-5031	Ship Engineers
Associate's degree	17-3025	Environmental Engineering Technologists and Technicians
	27-4012 29-2031	Broadcast Technicians Cardiovascular Technologists and Technicians
	29-2031 29-2033	Cardiovascular Technologists and Technicians Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
Bachelor's degree	11-2011	Advertising and Promotions Managers
	17-1021	Cartographers and Photogrammetrists
	17-2021 17-2021	Agricultural Engineers
	17-2031 17-2151	Bioengineers and Biomedical Engineers  Mining and Geological Engineers, Including Mining Safety Engineers
	19-1011	Animal Scientists
	19-1011 19-1031 19-2042	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers
	19-1011 19-1031 19-2042 19-4021	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians
	19-1011 19-1031 19-2042 19-4021 21-2099	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other
	19-1011 19-1031 19-2042 19-4021	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators
	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other
	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013 27-1027	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators Set and Exhibit Designers
	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013 27-1027 27-1029 27-3011 29-1129	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators Set and Exhibit Designers Designers, All Other Broadcast Announcers and Radio Disc Jockeys Therapists, All Other
Mactar's down-	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013 27-1029 27-3011 29-1129 29-1141	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators Set and Exhibit Designers Designers, All Other Broadcast Announcers and Radio Disc Jockeys Therapists, All Other Registered Nurses
Master's degree	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013 27-1027 27-1029 27-3011 29-1129 29-1141 19-3039	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators Set and Exhibit Designers Designers, All Other Broadcast Announcers and Radio Disc Jockeys Therapists, All Other Registered Nurses Psychologists, All Other
Master's degree	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013 27-1027 27-3011 29-1129 29-1141 19-3039 25-4011	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators Set and Exhibit Designers Designers, All Other Broadcast Announcers and Radio Disc Jockeys Therapists, All Other Registered Nurses
Master's degree	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013 27-1027 27-1029 27-3011 29-1129 29-1141 19-3039	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators Set and Exhibit Designers Designers, All Other Broadcast Announcers and Radio Disc Jockeys Therapists, All Other Registered Nurses Psychologists, All Other Archivists
Master's degree	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013 27-1027 27-1029 27-3011 29-1129 29-1141 19-3039 25-4011 25-4012	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators Set and Exhibit Designers Designers, All Other Broadcast Announcers and Radio Disc Jockeys Therapists, All Other Registered Nurses Psychologists, All Other Archivists Curators
-	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013 27-1027 27-3011 29-1129 29-1141 19-3039 25-4011 25-4012 29-1071 29-1151	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators Set and Exhibit Designers Designers, All Other Broadcast Announcers and Radio Disc Jockeys Therapists, All Other Registered Nurses Psychologists, All Other Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners
Master's degree  Doctoral or professional degree	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013 27-1027 27-3011 29-1129 29-1141 19-3039 25-4011 25-4012 29-1071 29-1151 29-1171	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators Set and Exhibit Designers Designers, All Other Broadcast Announcers and Radio Disc Jockeys Therapists, All Other Registered Nurses Psychologists, All Other Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners Business Teachers, Postsecondary
-	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013 27-1027 27-1029 27-3011 29-1129 29-1141 19-3039 25-4011 25-4012 29-1071 29-1151 29-1171 25-1011 25-1053	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators Set and Exhibit Designers Designers, All Other Broadcast Announcers and Radio Disc Jockeys Therapists, All Other Registered Nurses Psychologists, All Other Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners Business Teachers, Postsecondary Environmental Science Teachers, Postsecondary
-	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013 27-1027 27-1029 27-3011 29-1129 29-1141 19-3039 25-4011 25-4012 29-1071 29-1151 29-1171 25-1011 25-1053 25-1062	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators Set and Exhibit Designers Designers, All Other Broadcast Announcers and Radio Disc Jockeys Therapists, All Other Registered Nurses Psychologists, All Other Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners Business Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary
-	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013 27-1027 27-1029 27-3011 29-1129 29-1141 19-3039 25-4011 25-4012 29-1071 29-1151 29-1171 25-1011 25-1053	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators Set and Exhibit Designers Designers, All Other Broadcast Announcers and Radio Disc Jockeys Therapists, All Other Registered Nurses Psychologists, All Other Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners Business Teachers, Postsecondary Environmental Science Teachers, Postsecondary
-	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013 27-1027 27-1029 27-3011 29-1129 29-1141 19-3039 25-4011 25-4012 29-1071 29-1151 29-1171 25-1011 25-1062 25-1069	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators Set and Exhibit Designers Designers, All Other Broadcast Announcers and Radio Disc Jockeys Therapists, All Other Registered Nurses Psychologists, All Other Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners Business Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other
-	19-1011 19-1031 19-2042 19-4021 21-2099 25-4013 27-1027 27-1029 27-3011 29-1129 29-1141 19-3039 25-4011 25-4012 29-1071 29-1151 29-1171 25-1011 25-1053 25-1062 25-1069 25-1122	Animal Scientists Conservation Scientists Geoscientists, Except Hydrologists and Geographers Biological Technicians Religious Workers, All Other Museum Technicians and Conservators Set and Exhibit Designers Designers, All Other Broadcast Announcers and Radio Disc Jockeys Therapists, All Other Registered Nurses Psychologists, All Other Archivists Curators Physician Assistants Nurse Anesthetists Nurse Practitioners Business Teachers, Postsecondary Environmental Science Teachers, Postsecondary Area, Ethnic, and Cultural Studies Teachers, Postsecondary Social Sciences Teachers, Postsecondary, All Other Communications Teachers, Postsecondary

ucational Requirement	SOC Code	SOC Title
No formal educational credential	27-2031	Dancers
	33-9091 35-2019	Crossing Guards and Flaggers Cooks, All Other
	35-3041	Food Servers, Nonrestaurant
	37-2019	Building Cleaning Workers, All Other
	37-3019	Grounds Maintenance Workers, All Other
	39-3021	Motion Picture Projectionists
	39-3031	Ushers, Lobby Attendants, and Ticket Takers
	39-5093	Shampooers
	41-9011	Demonstrators and Product Promoters
	45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals
	45-2099	Agricultural Workers, All Other
	47-3011	HelpersBrickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
	47-3012	HelpersCarpenters
	47-3016	HelpersRoofers
	47-5013	Service Unit Operators, Oil and Gas
	51-3021 51-6051	Butchers and Meat Cutters
	51-6051 51-6052	Sewers, Hand Tailors, Dressmakers, and Custom Sewers
	51-9022	Grinding and Polishing Workers, Hand
	51-9022	Painting, Coating, and Decorating Workers
	53-5011	Sailors and Marine Oilers
	53-6021	Parking Attendants
	53-7041	Hoist and Winch Operators
	53-7061	Cleaners of Vehicles and Equipment
	53-7062	Laborers and Freight, Stock, and Material Movers, Hand
ligh school diploma or equivalent	11-9071	Gambling Managers
	11-9081	Lodging Managers
	21-1094	Community Health Workers
	27-1023	Floral Designers
	27-2023	Umpires, Referees, and Other Sports Officials
	27-2032 27-3099	Choreographers  Media and Communication Workers, All Other
	27-4021	Photographers
	29-2092	Hearing Aid Specialists
	31-1120	Home Health and Personal Care Aides
	33-3011	Bailiffs
	33-9011	Animal Control Workers
	33-9021	Private Detectives and Investigators
	37-3013	Tree Trimmers and Pruners
	39-1013	First-Line Supervisors of Gambling Services Workers
	39-3011	Gambling Dealers
	39-3093	Locker Room, Coatroom, and Dressing Room Attendants
	39-3099	Entertainment Attendants and Related Workers, All Other
	39-4021	Funeral Attendants
	39-6012	Concierges Tour and Traval Cuides
	39-7010	Tour and Travel Guides Residential Advisors
	39-9041 43-2011	Switchboard Operators, Including Answering Service
	43-3041	Gambling Cage Workers
	43-4111	Interviewers, Except Eligibility and Loan
	45-4022	Logging Equipment Operators
	47-2121	Glaziers
	47-2171	Reinforcing Iron and Rebar Workers
	47-4061	Rail-Track Laying and Maintenance Equipment Operators
	47-5081	HelpersExtraction Workers
	49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles
	49-9011	Mechanical Door Repairers
	49-9096	Riggers
	51-2041 51-4032	Structural Metal Fabricators and Fitters  Drilling and Reging Machine Tool Setters, Operators, and Tondors, Metal and Plastic
	51-4032 51-4035	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic
	51-4035 51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders
	51-6041	Shoe and Leather Workers and Repairers
	51-6092	Fabric and Apparel Patternmakers
	51-6093	Upholsterers
	51-7011	Cabinetmakers and Bench Carpenters
	51-7041	Sawing Machine Setters, Operators, and Tenders, Wood
	51-7099	Woodworkers, All Other
	51-8091	Chemical Plant and System Operators
	51-8099	Plant and System Operators, All Other
	51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders
	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders
	51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders
	51-9111	Packaging and Filling Machine Operators and Tenders
	51-9194	Etchers and Engravers Halpage Breduction Workers
	51-9198	HelpersProduction Workers  Ambulance Drivers and Attendants, Except Emergency Medical Technicians
	53-3011 53-6041	Ambulance Drivers and Attendants, Except Emergency Medical Technicians Traffic Technicians
	55-0041	
	53-6051	Transportation Inspectors

Workforce Region 24 - Occupational Areas of Concern by Educational Requirement

ducational Requirement	SOC Code	SOC Title
Some college, no degree	43-4151	Order Clerks
Postsecondary nondegree award	27-4011 27-4014	Audio and Video Technicians Sound Engineering Technicians
	27-4015	Lighting Technicians
	29-2061	Licensed Practical and Licensed Vocational Nurses
	31-1131	Nursing Assistants
	31-9011	Massage Therapists
	35-2013	Cooks, Private Household
	39-5012	Hairdressers, Hairstylists, and Cosmetologists
	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers
	49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay
	49-2097	Audiovisual Equipment Installers and Repairers
	49-9092	Commercial Divers Tool and Die Makers
	51-4111 53-5021	Captains, Mates, and Pilots of Water Vessels
Associate's degree	17-3012	Electrical and Electronics Drafters
Associate 3 degree	17-3025	Environmental Engineering Technologists and Technicians
	17-3026	Industrial Engineering Technologists and Technicians
	17-3027	Mechanical Engineering Technologists and Technicians
	19-4071	Forest and Conservation Technicians
	25-2011	Preschool Teachers, Except Special Education
	27-4012	Broadcast Technicians
	29-1124	Radiation Therapists
	29-2031	Cardiovascular Technologists and Technicians
	29-2033	Nuclear Medicine Technologists
	29-2035	Magnetic Resonance Imaging Technologists
	29-2051	Dietetic Technicians
	49-2021 49-2091	Radio, Cellular, and Tower Equipment Installers and Repairers Avionics Technicians
Bachelor's degree	11-1011	Chief Executives
buchelor 3 degree	11-2011	Advertising and Promotions Managers
	11-3111	Compensation and Benefits Managers
	13-1075	Labor Relations Specialists
	13-1121	Meeting, Convention, and Event Planners
	13-2081	Tax Examiners and Collectors, and Revenue Agents
	15-2011	Actuaries
	17-1012	Landscape Architects
	17-1021	Cartographers and Photogrammetrists
	17-2031	Bioengineers and Biomedical Engineers
	17-2131	Materials Engineers
	17-2151	Mining and Geological Engineers, Including Mining Safety Engineers
	19-1013 19-1023	Soil and Plant Scientists Zoologists and Wildlife Biologists
	19-1023	Conservation Scientists
	19-2042	Geoscientists, Except Hydrologists and Geographers
	19-2043	Hydrologists
	19-4021	Biological Technicians
	21-2099	Religious Workers, All Other
	25-2021	Elementary School Teachers, Except Special Education
	25-4013	Museum Technicians and Conservators
	27-1027	Set and Exhibit Designers
	27-1029	Designers, All Other
	27-3011	Broadcast Announcers and Radio Disc Jockeys
	29-1129	Therapists, All Other
Master's degree	29-1141 15-2041	Registered Nurses Statisticians
waster's degree	19-3039	Psychologists, All Other
	19-3033	Historians
	25-4011	Archivists
	25-4012	Curators
	29-1071	Physician Assistants
	29-1127	Speech-Language Pathologists
	29-1151	Nurse Anesthetists
	29-1161	Nurse Midwives
	29-1171	Nurse Practitioners
	29-2091	Orthotists and Prosthetists
Doctoral or professional degree	25-1011	Business Teachers, Postsecondary
	25-1053	Environmental Science Teachers, Postsecondary
	25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary
	25-1069	Social Sciences Teachers, Postsecondary, All Other
	25-1122	Communications Teachers, Postsecondary
	25-1193	Recreation and Fitness Studies Teachers, Postsecondary
	25-1199	Postsecondary Teachers, All Other Audiologists
	29-1181 29-1213	Dermatologists

# Labor Market Estimating Conference Methodology

# Educational Requirements...

A total of eight classifications are generally used to represent the typical education level most workers need to enter an occupation: "No formal education credential," "High school diploma or equivalent," "Some college, no degree," "Postsecondary nondegree award," "Associate's degree," "Bachelor's degree," "Master's degree," and "Doctoral or professional degree."

To assign a unique educational requirement to each occupation, a master list was developed by combining two products: (1) the Florida SkillsEngine CIP-SOC crosswalk, provided by the REACH Office; and (2) the Education and Training Assignments by detailed occupation, produced by the US Department of Labor, Bureau of Labor Statistics (BLS). The REACH crosswalk used the BLS 2018 SOC taxonomy. The BLS educational assignments also use the 2018 SOC taxonomy in this analysis.

The assignment procedure contained the following steps:

- For occupations that had a one-to-one linkage between the occupation and the educational requirement in PAIRIN's crosswalk:
  - A direct assignment was made, preserving the PAIRIN code.
- For occupations that had multiple educational requirements in PAIRIN's crosswalk:
  - As directed by the Reimagining Education and Career Help (REACH) and DOE workgroup,
     17 occupations (using 2018 SOC counts) were assigned the lower educational requirement.
- For occupations that had "Recognized industry credential" as the educational requirement in PAIRIN's crosswalk:
  - As directed by the REACH and DOE workgroup, 84 occupations (using 2018 SOC counts) were re-named "Postsecondary nondegree award" to match the category name in BLS's codes (but not necessarily the BLS educational assignment).
- For occupations that were absent from PAIRIN's crosswalk (209):
  - BLS educational requirement codes were assigned.

# **Determination of Areas of Concern**

Occupational Classification at the Statewide Level...

As a starting basis, the analysis used the 2018 SOC taxonomy, comprising 848 occupations. Of those, BLS OEWS for fiscal years 2021-22 and 2022-23 referenced 12 occupations from the preceding hybrid 2019 OES taxonomy. These 12 occupations were added into the complete list of 848, and their 28 counterparts from the 2018 SOC taxonomy were removed. The final occupational list used for this analysis was therefore a blend of the 2018 SOC and 2019 OES taxonomies, numbering 832 occupations. The analysis assumes that each of these 832 occupations exists in Florida.

#### Labor Supply...

The functional labor supply analysis is based on historical labor force and employment data for Florida from BLS and official statewide projections adopted by the Florida Economic Estimating Conference (FEEC) in accordance with ss. 216.133-216.136, Florida Statutes.

The supply determination procedure contained the following steps:

- A ratio of annual occupational employment (including self-employed) to the official labor force
  projection was calculated for each occupation from Florida's OEWS employment for fiscal years
  2020-21 and 2021-22 and Florida's IMPLAN estimates for fiscal year 2020-21. If OEWS data
  existed, the maximum ratio was selected, otherwise the IMPLAN ratio was utilized as the
  representative ratio of labor supply for that occupation. The selected ratios were increased
  proportionally such that the sum of the employment across all occupations represented 100% of
  the labor force.
- In order to produce labor supply by occupation for each forecasted year, the statewide labor supply was allocated to each occupation based on its adjusted ratio. These ratios were held constant throughout the forecast period.

#### Labor Demand...

The labor demand analysis utilizes a multi-step approach to estimate 10-year occupational employment, which broadly includes: (1) establishing a base employment value on an occupation-by-occupation basis in fiscal year 2021-22 to moderate the impact of COVID-19 on future employment estimates; and (2) conducting a series of tests based on set criteria to determine the best rate by which to grow each occupation.

The base employment determination procedure contained the following steps:

- Out of 832 occupations, 705 occupations' base years utilized the maximum employment from Florida's OEWS employment for either fiscal years 2020-21 or 2021-22 or Florida's IMPLAN estimates for fiscal year 2020-21, assuming that base-year demand must meet or exceed filled jobs.
- The remaining 127 occupations received special base-employment treatment. If their calculated maximum employment for the 2020-21 and 2021-22 period was at least 10% lower than their calculated maximum employment for the 2016-17, 2017-18, and 2018-19 period, the maximum base employment for the earlier employment period was used. Review showed that a significant number of these occupations were uniquely affected by pandemic effects.

The growth rate determination procedure contained the following steps:

• To determine the most appropriate growth rate by occupation, the analysis relied on Florida's per capita OEWS employment (without self-employed) by occupation compared to all states and the District of Columbia for fiscal years 2020-21 and 2021-22. A set of per capita ratios was generated using state employment published by BLS and population data published by the US Census Bureau. Published national OEWS estimates by occupation were used for the series mean, and a standard deviation of per capita employment for each occupation for each fiscal year was calculated. By occupation, Florida's ratios were then compared to the national mean in each year and evaluated to see if they fell within one standard deviation.

- A set of 3 conditions based from the standard deviation analysis were used to determine standard treatment for the assignment of occupational growth rates: (1) occupational employment fell outside of one standard deviation for both years; (2) occupational employment was missing for at least one year, but fell within one standard deviation for the other year; (3) occupational employment fell outside of one standard deviation for one year, but fell within one standard deviation for the other year.
  - Of the 127 occupations that utilized special base-employment, 118 met at least one of the conditions. These occupations were grown by Florida's Total Resident Population growth rate.
    - The remaining 9 occupations that failed to meet one of the conditions were independently reviewed and assigned variable population growth rates.
  - o For the remaining 705 occupations that utilized standard base employment, 556 occupations met either the first or second condition. These occupations were grown by their respective Florida Economic Estimating Conference growth rates and Florida Demographic Estimating Conference growth rates as adopted by the October 2022 Labor Market Estimating Conference, albeit updated with most recent data. For those occupations that were previously treated with a unique growth rate, Florida's Total Resident Population growth rate was used.
    - For the remaining 149 occupations that failed to meet one of the conditions, 130 occupations were independently reviewed and assigned variable population growth rates. The final 19 occupations maintained the previous unique growth rate adopted at the October 2022 Labor Market Estimating Conference.
  - All teaching and healthcare occupations were designated for independent review, and the Legislators occupation kept static, regardless of their outcomes in the standard deviation analysis.

# Areas of Concern...

After supply and demand were independently modeled, an analysis was performed to identify those occupations that could potentially be in undersupply in the final year of the forecast horizon. For details, see below.

#### Occupational Areas of Concern (by educational requirement)

These occupations were identified by comparing occupational supply and demand in the 10th year of the forecast to determine where projected demand exceeds expected supply by more than 10%. Essentially, this condition means that (1) demand exceeds supply currently and will continue to do so in the future, or (2) the growth in future demand will outpace the likely labor supply for that occupation. These findings were produced by a model run that simulated occupation's employment supply and demand trajectories over the forecast period. The overall methodology:

- Used current occupational shares of the labor supply against the forecast adopted by the Florida Economic Estimating Conference for all future years.
- Selected a base year of potential demand from a maximum of five nonconsecutive years, using the assumption that demand must equal or exceed filled jobs. The base was then grown by various growth rates (predominately population driven).

Although, some occupations have both limited supply and demand, the analysis found that there is reason to believe that a significant gap in supply will exist for 101 out of 832 discrete occupations (12.1%). Note that evolving or emerging trends have yet to be addressed. As such,

this analysis does not alter the existing economic structure, meaning the results represent foundational imbalances that would be expected to persist into the future, absent intervention.

#### **Sources**

Occupational Taxonomy - Codes and Titles...

In certain instances, occupational codes and titles were used in this analysis from the US Department of Labor, Bureau of Labor Statistics, Standard Occupational Classification System and the National Employment Matrix Occupational Coverage, BLS Office of Occupational Statistics and Employment Projections (<a href="https://www.bls.gov/soc/home.htm">https://www.bls.gov/soc/home.htm</a>). The 2018 Standard Occupational Classification (SOC) was used as the base year OEWS data in this analysis.

The 2018 Standard Occupational Classification (SOC) system is a federal statistical standard used by federal agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. All workers are classified into one of 867 detailed occupations according to their occupational definition. Excluding the military occupations, there are 848 civilian occupations. To facilitate classification, detailed occupations are combined to form 459 broad occupations, 98 minor groups, and 23 major groups. Detailed occupations in the SOC with similar job duties, and in some cases skills, education, and/or training, are grouped together. This analysis focuses on the 22 civilian occupational groups and excludes military occupations (major group 55). To reflect changes in the economy and the nature of work, the SOC is revised on a 10-year cycle.

The 2018 SOC taxonomy with the 848 civilian occupations is the starting point. However, data are not yet available for 28 of these detailed occupations. Instead, BLS published aggregated data for 12 occupations representing the 28 detailed occupations, resulting in a total of 832 occupations with published data in this analysis.

The 2018 taxonomy replaces the 2019 OEWS hybrid taxonomy used in prior Labor Market Estimating Conferences.

Employment by Occupation...

- State Occupational Employment and Wage Estimates, US Department of Labor, Bureau of Labor Statistics, https://www.bls.gov/oes/current/oes\_fl.htm.
- Florida Department of Economic Opportunity, Bureau of Workforce Statistics and Economic Research, OES Occupational Employment Statistics and Wages - FloridaJobs.org.

The Occupational Employment and Wage Statistics (OEWS) survey is a national semiannual survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. It is the most detailed public source of occupational data available in terms of both occupational nomenclature and local geographies. OEWS estimates are constructed from a sample of about 1.1 million national establishments. Each year, two semiannual panels of approximately 180,000 to 185,000 sampled establishments are contacted, one panel in May and the other in November. Responses are obtained by mail, internet or other electronic means, email, telephone, or personal visit. The May 2020 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2020, November 2019, May 2019, November 2018, May 2018, and November 2017. The unweighted sampled employment of 83 million across all six semiannual panels represents approximately 56% of total national employment. In Florida, the OEWS survey draws its sample from state Reemployment Assistance (unemployment insurance) files. This

data source excludes the self-employed since they are not subject to the Reemployment Assistance tax and the OEWS does not collect data on them. The Florida sample for OEWS is slightly less than 11,000 units (establishments) per survey panel and approximately 66,000 total units over the six panels comprising the data used to publish the annual release.

National self-employment factors were applied to occupational employment based on data from the US Department of Labor, Bureau of Labor Statistics. These factors expand the occupational employment estimates to account for the self-employed. Some occupations, such as barbers and real estate brokers, tend to have more self-employed or sole proprietors (unincorporated businesses) than others. Wages for the OEWS survey are straight-time, gross pay, exclusive of premium pay. Base rate; cost-of-living allowances; guaranteed pay; hazardous-duty pay; incentive pay, including commissions and production bonuses; and tips are included. Excluded are overtime pay, severance pay, shift differentials, nonproduction bonuses, employer cost for supplementary benefits, and tuition reimbursements.

In order to combine the panels, wage data collected over the span of the three years is updated to the current panel's reference period using the BLS Employment Cost Index (ECI). Wages for the current panel need no further adjustment. The wage updating procedure adjusts each detailed occupation's wage rate, as measured in the earlier panel, according to the average movement of its broader occupational division. For more information on the methodology, please see <a href="https://www.bls.gov/oes/current/oes-tec.htm">https://www.bls.gov/oes/current/oes-tec.htm</a>.

#### Employment Estimates from IMPLAN...

IMPLAN (www.implan.com) is a proprietary economic modeling platform that combines a set of extensive databases, economic factors, multipliers, and demographic statistics with a highly refined modeling system. IMPLAN is based on an input-output economic model. Input-output analysis is a form of economic analysis based on the interdependencies between economic sectors. Input-output is commonly used to estimate the impacts of "shocks" to an economy and to analyze their resulting ripple effects. IMPLAN data contains 546 sectors representing all private industries in the United States as defined by the North American Industry Classification System (NAICS) codes. Employment, employee compensation, industry expenditures, commodity demands, relationships between industries, and more are collected to form IMPLAN's ever-growing database.

#### Florida SkillsEngine CIP to SOC Crosswalk...

Florida SkillsEngine, a subcontractor of PAIRIN Inc., created a new CIP to SOC crosswalk under contract with the Florida Department of Education using data from the National Center for Education Statistics (NCES). PAIRIN describes the crosswalk as follows: "The Classification of Instructional Programs (CIP) provides a taxonomic scheme that supports the accurate tracking and reporting of fields of study and program completions activity. The value of a CIP to SOC crosswalk is to demonstrate the connection between the world of work and the world of education using CIP programs and SOC occupational titles as functional proxies. These proxies are imperfect representations of their respective 'worlds', each with inherently different qualities, organizational constructs, and clearing mechanisms. The ultimate goal of a CIP to SOC crosswalk is to draw a reasonable association between these two worlds so the educational community can, if it chooses, demonstrate or plan to offer programs-of-study aligned with existing or future labor market demand."