

Supply/Demand Analysis for all Career Education Programs

The purpose of this appendix is to provide a stand-alone supply/demand analysis for each career education program in the region that reported completions during the last three academic years. Programs are organized alphabetically by sector, and then by TOP code within each sector. The “Unassigned” sector is comprised of programs that have not been assigned to a sector. The “Other” sector contains programs for which there are either no crosswalked middle-skill occupations, or the program is intentionally classified as “other” due to the lack of a more specific TOP code.

This appendix contains the following data elements:

Data Element	Definition
Program Title - TOP	<i>Program title and corresponding TOP code. Program titles used at individual colleges may vary. This program title is directly from the Taxonomy of Programs manual.</i>
Annual average credentials awarded, 2015-18	<i>The number of credentials (the combined number of certificates and degrees) issued by the 12 IEDR community colleges during the last three academic years (2015-16, 2016-17 & 2017-18), divided by three.</i>
Crosswalked Occupations (Annual Job Openings)	<i>Occupations related to each program. Sourced from the Centers of Excellence TOP-SOC crosswalk. Annual job openings represent the number of projected job opportunities for each occupation during the five-year projection period, 2018 to 2023.</i>
Combined Annual Job Openings	<i>The combined number of job openings for all occupations crosswalked to a program.</i>
Potential Workforce Deficit/ Surplus	<i>The number of credentials minus the combined annual openings.</i>

Sources: Chancellor’s Office Management Information Systems Data Mart (MIS), EMSI 2019.2, TOP-SOC Crosswalk & Taxonomy of Programs

Table of Contents

Advanced Manufacturing	2
Advanced Transportation and Logistics.....	3
Agriculture, Water and Environmental Technologies	4
Business and Entrepreneurship	5
Education and Human Development.....	6
Energy, Construction and Utilities.....	7
Global Trade	8
Health	8
Information and Communication Technologies - Digital Media	9
Public Safety	12
Retail, Hospitality and Tourism.....	12
Unassigned	13
Other	14

Program Title - TOP	Annual average credentials awarded, 2015-18	Crosswalked Occupations (Annual Job Openings)	Combined Annual Job Openings	Potential Workforce Deficit/Surplus
Advanced Manufacturing				
Engineering Technology, General (requires Trigonometry)-092400	10	<ul style="list-style-type: none"> • Electrical and Electronics Engineering Technicians (87) • Civil Engineering Technicians (82) • Engineering Technicians, Except Drafters, All Other (70) • Industrial Engineering Technicians (39) • Mechanical Engineering Technicians (14) 	291	-281
Electronics and Electric Technology-093400	38	<ul style="list-style-type: none"> • Electrical and Electronics Engineering Technicians (87) • Electrical and Electronics Repairers, Commercial and Industrial Equipment (71) • Electrical and Electronics Repairers, Powerhouse, Substation, and Relay (30) • Electric Motor, Power Tool, and Related Repairers (16) • Electrical and Electronics Installers and Repairers, Transportation Equipment (14) 	217	-179
Computer Electronics-093410	20	<ul style="list-style-type: none"> • Computer, Automated Teller, and Office Machine Repairers (96) • Electrical and Electronics Engineering Technicians (87) • Electrical and Electronics Repairers, Commercial and Industrial Equipment (71) 	253	-234
Printing and Lithography-093600	-	<ul style="list-style-type: none"> • Printing Press Operators (142) • Prepress Technicians and Workers (14) 	156	-156
Instrumentation Technology-094300	-	<ul style="list-style-type: none"> • Electrical and Electronics Engineering Technicians (87) • Engineering Technicians, Except Drafters, All Other (70) • Electro-Mechanical Technicians (29) • Precision Instrument and Equipment Repairers, All Other (10) 	195	-195
Industrial Systems Technology and Maintenance-094500	5	<ul style="list-style-type: none"> • Maintenance and Repair Workers, General (1,638) • Industrial Machinery Mechanics (310) 	1,948	(1,943)

Program Title - TOP	Annual average credentials awarded, 2015-18	Crosswalked Occupations (Annual Job Openings)	Combined Annual Job Openings	Potential Workforce Deficit/Surplus
Aeronautical and Aviation Technology-095000	21	<ul style="list-style-type: none"> • Aircraft Structure, Surfaces, Rigging, and Systems Assemblers (28) • Avionics Technicians (23) • Aircraft Mechanics and Service Technicians (172) • Aerospace Engineering and Operations Technicians (12) 	236	-216
Aircraft Electronics (Avionics)-095040	-	<ul style="list-style-type: none"> • Aircraft Structure, Surfaces, Rigging, and Systems Assemblers (28) • Avionics Technicians (23) • Aerospace Engineering and Operations Technicians (12) 	64	-64
Mechanical Drafting-095340	5	<ul style="list-style-type: none"> • Mechanical Drafters (46) 	46	-41
Manufacturing and Industrial Technology-095600	25	<ul style="list-style-type: none"> • Electrical and Electronics Repairers, Commercial and Industrial Equipment (71) • Engineering Technicians, Except Drafters, All Other (70) • Inspectors, Testers, Sorters, Samplers, and Weighers (593) • Industrial Engineering Technicians (39) • Machinists (359) • Tool and Die Makers (33) • Industrial Machinery Mechanics (310) • Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic (30) • Computer-Controlled Machine Tool Operators, Metal and Plastic (126) 	1,631	-1,605
Machining and Machine Tools-095630	14	<ul style="list-style-type: none"> • Machinists (359) • Computer-Controlled Machine Tool Operators, Metal and Plastic (126) 	485	-471
Welding Technology-095650	99	<ul style="list-style-type: none"> • Welders, Cutters, Solderers, and Brazers (398) • Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (15) 	413	-314
Advanced Transportation and Logistics				
Logistics and Materials Transportation-051000	27	<ul style="list-style-type: none"> • Engineering Technicians, Except Drafters, All Other (70) • Production, Planning, and Expediting Clerks (504) • Transportation, Storage, and Distribution Managers (274) • Logisticians (192) • Cargo and Freight Agents (124) • Industrial Production Managers (110) 	1,273	-1,246

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Diesel Technology-094700	16	<ul style="list-style-type: none"> • Bus and Truck Mechanics and Diesel Engine Specialists (472) • Farm Equipment Mechanics and Service Technicians (12) 	484	-467
Automotive Technology-094800	233	<ul style="list-style-type: none"> • Electronic Equipment Installers and Repairers, Motor Vehicles (18) • Electrical and Electronics Installers and Repairers, Transportation Equipment (14) • Automotive Service Technicians and Mechanics (1,124) 	1,157	-924
Alternative Fuels and Advanced Transportation Technology-094840	3	<ul style="list-style-type: none"> • Automotive Service Technicians and Mechanics (1,124) 	1,124	-1,121
Automotive Collision Repair-094900	34	<ul style="list-style-type: none"> • Insurance Appraisers, Auto Damage (4) • Automotive Body and Related Repairers (181) 	185	-151
Aviation Airframe Mechanics-095010	45	<ul style="list-style-type: none"> • Aircraft Structure, Surfaces, Rigging, and Systems Assemblers (28) • Aircraft Mechanics and Service Technicians (172) 	201	-156
Aviation Powerplant Mechanics-095020	53	<ul style="list-style-type: none"> • Aircraft Structure, Surfaces, Rigging, and Systems Assemblers (28) • Aircraft Mechanics and Service Technicians (172) 	201	-148
Agriculture, Water and Environmental Technologies				
Agriculture Technology and Sciences, General-010100	1	<ul style="list-style-type: none"> • Life, Physical, and Social Science Technicians, All Other (47) • Agricultural Inspectors (29) • Agricultural and Food Science Technicians (28) 	104	-104
Horticulture-010900	49	<ul style="list-style-type: none"> • First-Line Supervisors of Farming, Fishing, and Forestry Workers (61) • First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers (226) • Farmers, Ranchers, and Other Agricultural Managers (170) 	457	-408
Nursery Technology-010930	3	<ul style="list-style-type: none"> • Pesticide Handlers, Sprayers, and Applicators, Vegetation (74) • First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers (226) • Farmers, Ranchers, and Other Agricultural Managers (170) 	470	-467

Program Title - TOP	Annual average credentials awarded, 2015-18	Crosswalked Occupations (Annual Job Openings)	Combined Annual Job Openings	Potential Workforce Deficit/Surplus
Turfgrass Technology-010940	25	<ul style="list-style-type: none"> • Pesticide Handlers, Sprayers, and Applicators, Vegetation (74) • First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers (226) 	300	-275
Agriculture Business, Sales and Service-011200	2	<ul style="list-style-type: none"> • Farmers, Ranchers, and Other Agricultural Managers (170) 	170	-168
Natural Resources-011500	5	<ul style="list-style-type: none"> • First-Line Supervisors of Farming, Fishing, and Forestry Workers (61) 	61	-56
Environmental Technology-030300	0	<ul style="list-style-type: none"> • Environmental Engineering Technicians (30) 	30	-29
Business and Entrepreneurship				
Business and Commerce, General-050100	168	<ul style="list-style-type: none"> • Construction Managers (460) • Cost Estimators (375) • Administrative Services Managers (271) • Industrial Production Managers (110) 	1,216	-1,048
Accounting-050200	224	<ul style="list-style-type: none"> • Tax Examiners and Collectors, and Revenue Agents (34) • Payroll and Timekeeping Clerks (231) • Brokerage Clerks (14) • Tax Preparers (102) • Bookkeeping, Accounting, and Auditing Clerks (1,915) 	2,296	-2,072
Tax Studies-050210	4	<ul style="list-style-type: none"> • Tax Examiners and Collectors, and Revenue Agents (34) • Tax Preparers (102) 	136	-132
Banking and Finance-050400	3	<ul style="list-style-type: none"> • Statistical Assistants (8) • Tellers (349) • New Accounts Clerks (3) • Bill and Account Collectors (273) • Credit Counselors (27) • Credit Authorizers, Checkers, and Clerks (24) • Loan Interviewers and Clerks (153) 	838	-835
Business Administration-050500	892	<ul style="list-style-type: none"> • Cost Estimators (375) • Administrative Services Managers (271) • Industrial Production Managers (110) 	756	136
Business Management-050600	168	<ul style="list-style-type: none"> • Cost Estimators (375) • Administrative Services Managers (271) • Industrial Production Managers (110) 	756	-588

Program Title - TOP	Annual average credentials awarded, 2015-18	Crosswalked Occupations (Annual Job Openings)	Combined Annual Job Openings	Potential Workforce Deficit/Surplus
Management Development and Supervision-050630	7	<ul style="list-style-type: none"> • Food Service Managers (540) • Lodging Managers (49) • Administrative Services Managers (271) • First-Line Supervisors of Office and Administrative Support Workers (1,688) 	2,548	-2,541
Small Business and Entrepreneurship-050640	22	<ul style="list-style-type: none"> • Business Operations Specialists, All Other (902) • Administrative Services Managers (271) 	1,173	-1,150
Marketing and Distribution-050900	16	<ul style="list-style-type: none"> • Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products (1,801) 	1,801	-1,785
Real Estate-051100	62	<ul style="list-style-type: none"> • Appraisers and Assessors of Real Estate (64) • Real Estate Sales Agents (420) • Property, Real Estate, and Community Association Managers (241) • Real Estate Brokers (113) 	837	-775
Escrow-051110	4	<ul style="list-style-type: none"> • Appraisers and Assessors of Real Estate (64) • Title Examiners, Abstractors, and Searchers (46) • Real Estate Sales Agents (420) • Loan Officers (228) • Real Estate Brokers (113) 	870	-866
Legal Office Technology-051410	3	<ul style="list-style-type: none"> • Legal Secretaries (148) 	148	-144
Cosmetology and Barbering-300700	114	<ul style="list-style-type: none"> • Hairdressers, Hairstylists, and Cosmetologists (1,300) • Barbers (135) 	1,435	(1,321)
Education and Human Development				
Educational Aide (Teacher Assistant)-080200	14	<ul style="list-style-type: none"> • Teacher Assistants (2,410) 	2,410	-2,396
Recreation Assistant-083610	1	<ul style="list-style-type: none"> • Recreation Workers (693) 	693	-692
Sign Language Interpreting-085010	26	<ul style="list-style-type: none"> • Interpreters and Translators (93) 	93	-67
Child Development/Early Care and Education-130500	670	<ul style="list-style-type: none"> • Preschool Teachers, Except Special Education (464) • Childcare Workers (2,060) 	2,524	-1,854
Children with Special Needs-130520	20	<ul style="list-style-type: none"> • Special Education Teachers, Preschool (13) 	13	8
The School Age Child-130550	1	<ul style="list-style-type: none"> • Childcare Workers (2,060) 	2,060	-2,059

Program Title - TOP	Annual average credentials awarded, 2015-18	Crosswalked Occupations (Annual Job Openings)	Combined Annual Job Openings	Potential Workforce Deficit/Surplus
Parenting and Family Education-130560	0	<ul style="list-style-type: none"> • Social and Human Service Assistants (626) 	626	-626
Infants and Toddlers-130590	10	<ul style="list-style-type: none"> • Childcare Workers (2,060) 	2,060	-2,049
Energy, Construction and Utilities				
Architecture and Architectural Technology-020100	23	<ul style="list-style-type: none"> • Mechanical Drafters (46) • Electrical and Electronics Drafters (28) • Architectural and Civil Drafters (120) 	195	-172
Electrical Systems and Power Transmission-093440	59	<ul style="list-style-type: none"> • Electrical and Electronics Engineering Technicians (87) • First-Line Supervisors of Mechanics, Installers, and Repairers (482) • Electrical and Electronics Repairers, Powerhouse, Substation, and Relay (30) • Power Distributors and Dispatchers (21) • Electrical Power-Line Installers and Repairers (129) 	749	-690
Environmental Control Technology-094600	83	<ul style="list-style-type: none"> • Heating, Air Conditioning, and Refrigeration Mechanics and Installers (531) • Sheet Metal Workers (243) 	774	-691
Energy Systems Technology-094610	0	<ul style="list-style-type: none"> • Solar Photovoltaic Installers (71) • Heating, Air Conditioning, and Refrigeration Mechanics and Installers (531) 	602	-602
Construction Crafts Technology-095200	16	<ul style="list-style-type: none"> • First-Line Supervisors of Construction Trades and Extraction Workers (864) • Civil Engineering Technicians (82) • Cost Estimators (375) 	1,321	-1,306
Electrical-095220	23	<ul style="list-style-type: none"> • Electricians (1,161) 	1,161	(1,138)
Drafting Technology-095300	55	<ul style="list-style-type: none"> • Mechanical Drafters (46) • Electrical and Electronics Drafters (28) • Architectural and Civil Drafters (120) • Drafters, All Other (11) 	205	-150
Architectural Drafting-095310	2	<ul style="list-style-type: none"> • Architectural and Civil Drafters (12) 	120	-119
Civil and Construction Management Technology-095700	5	<ul style="list-style-type: none"> • First-Line Supervisors of Construction Trades and Extraction Workers (864) • Construction Managers (460) 	1,325	-1,320
Construction Inspection-095720	17	<ul style="list-style-type: none"> • First-Line Supervisors of Construction Trades and Extraction Workers (864) • Construction and Building Inspectors (157) 	1,021	-1,005

Program Title - TOP	Annual average credentials awarded, 2015-18	Crosswalked Occupations (Annual Job Openings)	Combined Annual Job Openings	Potential Workforce Deficit/Surplus
Water and Wastewater Technology-095800	54	<ul style="list-style-type: none"> • Environmental Engineering Technicians (30) • Water and Wastewater Treatment Plant and System Operators (127) 	156	-102
Public Works-210210	-	<ul style="list-style-type: none"> • First-Line Supervisors of Construction Trades and Extraction Workers (864) • Civil Engineering Technicians (82) 	946	-946
Global Trade				
International Business and Trade-050800	9	<ul style="list-style-type: none"> • Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products (1,801) • Buyers and Purchasing Agents (410) 	2,211	(2,202)
Health				
Medical Office Technology-051420	2	<ul style="list-style-type: none"> • Medical Secretaries (1,016) 	1,016	(1,014)
Phlebotomy-120510	5	<ul style="list-style-type: none"> • Phlebotomists (165) 	165	-160
Medical Assisting-120800	41	<ul style="list-style-type: none"> • Medical Assistants (1,302) 	1,302	-1,261
Administrative Medical Assisting-120820	-	<ul style="list-style-type: none"> • Medical Assistants (1,302) • Medical Secretaries (1,016) 	2,318	-2,318
Respiratory Care/Therapy-121000	50	<ul style="list-style-type: none"> • Respiratory Therapy Technicians (4) • Respiratory Therapists (130) 	133	-83
Pharmacy Technology-122100	50	<ul style="list-style-type: none"> • Pharmacy Technicians (399) 	399	-349
Radiologic Technology-122500	39	<ul style="list-style-type: none"> • Radiologic Technologists (137) 	137	-98
Diagnostic Medical Sonography-122700	8	<ul style="list-style-type: none"> • Diagnostic Medical Sonographers (49) 	49	-41
Athletic Training and Sports Medicine-122800	4	<ul style="list-style-type: none"> • Fitness Trainers and Aerobics Instructors (661) 	661	-657
Registered Nursing-123010	539	<ul style="list-style-type: none"> • Registered Nurses (2,307) 	2,307	-1,768
Licensed Vocational Nursing-123020	158	<ul style="list-style-type: none"> • Licensed Practical and Licensed Vocational Nurses (732) 	732	-574
Certified Nurse Assistant-123030	80	<ul style="list-style-type: none"> • Nursing Assistants (1,211) 	1,211	-1,131
Psychiatric Technician-123900	55	<ul style="list-style-type: none"> • Psychiatric Aides (44) • Psychiatric Technicians (103) 	147	-92
Dental Assistant-124010	35	<ul style="list-style-type: none"> • Dental Assistants (736) 	736	-701
Dental Hygienist-124020	13	<ul style="list-style-type: none"> • Dental Hygienists (186) 	186	-173

Program Title - TOP	Annual average credentials awarded, 2015-18	Crosswalked Occupations (Annual Job Openings)	Combined Annual Job Openings	Potential Workforce Deficit/Surplus
Dental Laboratory Technician-124030	-	<ul style="list-style-type: none"> Dental Laboratory Technicians (48) 	48	-48
Emergency Medical Services-125000	232	<ul style="list-style-type: none"> Emergency Medical Technicians and Paramedics (262) 	262	-30
Paramedic-125100	87	<ul style="list-style-type: none"> Emergency Medical Technicians and Paramedics (262) 	262	-175
Nutrition, Foods, and Culinary Arts-130600	7	<ul style="list-style-type: none"> Dietetic Technicians (42) Chefs and Head Cooks (273) First-Line Supervisors of Food Preparation and Serving Workers (1,642) 	1,957	-1,949
Dietetic Services and Management-130620	7	<ul style="list-style-type: none"> Food Service Managers (540) Dietetic Technicians (42) First-Line Supervisors of Food Preparation and Serving Workers (1,642) 	2,224	-2,216
Gerontology-130900	12	<ul style="list-style-type: none"> Home Health Aides (871) Community Health Workers (63) 	934	-922
Alcohol and Controlled Substances-210440	139	<ul style="list-style-type: none"> Community Health Workers (63) Social and Human Service Assistants (626) 	689	-550
Information and Communication Technologies - Digital Media				
Office Technology/Office Computer Applications-051400	149	<ul style="list-style-type: none"> Procurement Clerks (77) Executive Secretaries and Executive Administrative Assistants (443) Data Entry Keyers (215) Secretaries and Administrative Assistants, Except Legal, Medical, and Executive (2,677) Cargo and Freight Agents (124) 	3,536	-3,387
Radio and Television-060400	21	<ul style="list-style-type: none"> Audio and Video Equipment Technicians (90) Broadcast Technicians (9) Producers and Directors (62) Film and Video Editors (23) Radio and Television Announcers (17) Camera Operators, Television, Video, and Motion Picture (14) Sound Engineering Technicians (10) 	225	-203
Radio-060410	3	<ul style="list-style-type: none"> Broadcast Technicians (9) Producers and Directors (62) Radio and Television Announcers (17) 	88	-84

Program Title - TOP	Annual average credentials awarded, 2015-18	Crosswalked Occupations (Annual Job Openings)	Combined Annual Job Openings	Potential Workforce Deficit/Surplus
Television (including combined TV/Film/Video)-060420	43	<ul style="list-style-type: none"> • Audio and Video Equipment Technicians (90) • Broadcast Technicians (9) • Producers and Directors (62) • Film and Video Editors (23) • Radio and Television Announcers (17) • Camera Operators, Television, Video, and Motion Picture (14) • Sound Engineering Technicians (10) 	225	-182
Mass Communications-061000	-	<ul style="list-style-type: none"> • Interpreters and Translators (93) 	93	-93
Film Production-061220	23	<ul style="list-style-type: none"> • Producers and Directors (62) • Multimedia Artists and Animators (24) • Film and Video Editors (23) • Camera Operators, Television, Video, and Motion Picture (14) • Sound Engineering Technicians (10) 	133	-110
Digital Media-061400	29	<ul style="list-style-type: none"> • Desktop Publishers (7) • Graphic Designers (263) • Multimedia Artists and Animators (24) • Prepress Technicians and Workers (14) • Photographers (134) 	443	-414
Multimedia-061410	31	<ul style="list-style-type: none"> • Desktop Publishers (7) • Graphic Designers (263) • Multimedia Artists and Animators (24) 	295	-264
Electronic Game Design-061420	26	<ul style="list-style-type: none"> • Multimedia Artists and Animators (24) • Computer Occupations, All Other (154) 	178	-152
Website Design and Development-061430	3	<ul style="list-style-type: none"> • Graphic Designers (263) • Web Developers (100) 	363	-360
Animation-061440	5	<ul style="list-style-type: none"> • Multimedia Artists and Animators (24) • Film and Video Editors (23) • Sound Engineering Technicians (10) 	57	-52
Desktop Publishing-061450	2	<ul style="list-style-type: none"> • Desktop Publishers (7) • Prepress Technicians and Workers (14) 	21	-19
Computer Graphics and Digital Imagery-061460	19	<ul style="list-style-type: none"> • Graphic Designers (263) • Multimedia Artists and Animators (24) 	288	-268
Information Technology, General-070100	6	<ul style="list-style-type: none"> • Computer Network Architects (28) • Computer Occupations, All Other (154) • Network and Computer Systems Administrators (139) 	321	-315

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Computer Information Systems-070200	152	<ul style="list-style-type: none"> • Computer User Support Specialists (346) • Computer Network Architects (28) • Computer Occupations, All Other (154) • Network and Computer Systems Administrators (139) 	667	-515
Software Applications-070210	16	<ul style="list-style-type: none"> • Computer User Support Specialists (346) • Data Entry Keyers (215) • Web Developers (100) • First-Line Supervisors of Office and Administrative Support Workers (1,688) 	2,348	-2,332
Computer Programming-070710	80	<ul style="list-style-type: none"> • Web Developers (100) • Computer Network Support Specialists (100) 	200	-120
Computer Systems Analysis-070730	2	<ul style="list-style-type: none"> • Computer Network Architects (28) • Computer Network Support Specialists (100) 	128	-126
Computer Networking-070810	119	<ul style="list-style-type: none"> • Computer User Support Specialists (346) • Computer Network Architects (28) • Network and Computer Systems Administrators (139) • Computer Network Support Specialists (100) 	613	-494
Computer Support-070820	-	<ul style="list-style-type: none"> • Computer User Support Specialists (346) • Computer Network Architects (28) • Network and Computer Systems Administrators (139) • Computer Network Support Specialists (100) 	613	-613
World Wide Web Administration-070900	11	<ul style="list-style-type: none"> • Computer Network Architects (28) • Network and Computer Systems Administrators (139) • Web Developers (100) • Computer Network Support Specialists (100) 	367	-356
Other Information Technology-079900	1	<ul style="list-style-type: none"> • Computer Occupations, All Other (154) 	154	-153
Telecommunications Technology-093430	4	<ul style="list-style-type: none"> • Telecommunications Equipment Installers and Repairers, Except Line Installers (397) • Telecommunications Line Installers and Repairers (161) • Network and Computer Systems Administrators (139) 	698	-694
Commercial Music-100500	46	<ul style="list-style-type: none"> • Audio and Video Equipment Technicians (90) • Sound Engineering Technicians (10) 	100	-54
Applied Photography-101200	29	<ul style="list-style-type: none"> • Photographers (134) 	134	-105

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Commercial Art-101300	3	<ul style="list-style-type: none"> Commercial and Industrial Designers (32) Graphic Designers (263) 	295	-293
Graphic Art and Design-103000	54	<ul style="list-style-type: none"> Graphic Designers (263) Multimedia Artists and Animators (24) 	288	-234
Geographic Information Systems-220610	4	<ul style="list-style-type: none"> Surveying and Mapping Technicians (48) Computer Occupations, All Other (154) 	202	-198
Public Safety				
Administration of Justice-210500	510	<ul style="list-style-type: none"> Detectives and Criminal Investigators (87) Police and Sheriff's Patrol Officers (548) First-Line Supervisors of Correctional Officers (44) Bailiffs (4) First-Line Supervisors of Police and Detectives (33) 	716	-206
Corrections-210510	49	<ul style="list-style-type: none"> First-Line Supervisors of Correctional Officers (44) Correctional Officers and Jailers (395) First-Line Supervisors of Police and Detectives (33) 	472	-423
Industrial and Transportation Security-210530	1	<ul style="list-style-type: none"> Transit and Railroad Police (4) Transportation Security Screeners (23) 	27	-25
Forensics, Evidence, and Investigation-210540	22	<ul style="list-style-type: none"> Forensic Science Technicians (35) 	35	-13
Police Academy-210550	93	<ul style="list-style-type: none"> Detectives and Criminal Investigators (87) Police and Sheriff's Patrol Officers (548) Bailiffs (4) 	639	-546
Fire Technology-213300	121	<ul style="list-style-type: none"> Fire Inspectors and Investigators (7) Firefighters (229) First-Line Supervisors of Fire Fighting and Prevention Workers (19) 	255	-134
Fire Academy-213350	81	<ul style="list-style-type: none"> Fire Inspectors and Investigators (7) Firefighters (229) Forest Fire Inspectors and Prevention Specialists (2) 	238	-157
Retail, Hospitality and Tourism				
Retail Store Operations and Management-050650	6	<ul style="list-style-type: none"> First-Line Supervisors of Retail Sales Workers (1,883) 	1,883	(1,877)
Office Management-051440	25	<ul style="list-style-type: none"> First-Line Supervisors of Office and Administrative Support Workers (1,688) 	1,688	(1,663)

IEDR Supply/Demand Analysis for all Career Education Programs

Program Title - TOP	Annual average credentials awarded, 2015-18	Crosswalked Occupations (Annual Job Openings)	Combined Annual Job Openings	Potential Workforce Deficit/Surplus
Family and Consumer Sciences, General-130100	-	<ul style="list-style-type: none"> Social and Human Service Assistants (626) 	626	-626
Consumer Services-130110	2	<ul style="list-style-type: none"> Customer Service Representatives (2,578) 	2,578	-2,576
Fashion Design-130310	14	<ul style="list-style-type: none"> Fashion Designers (37) 	37	-23
Culinary Arts-130630	95	<ul style="list-style-type: none"> Cooks, Private Household (3) Chefs and Head Cooks (273) First-Line Supervisors of Food Preparation and Serving Workers (1,642) 	1,918	-1,823
Hospitality-130700	4	<ul style="list-style-type: none"> Food Service Managers (540) Lodging Managers (49) First-Line Supervisors of Food Preparation and Serving Workers (1,642) 	2,232	-2,227
Restaurant and Food Services and Management-130710	46	<ul style="list-style-type: none"> Food Service Managers (540) Chefs and Head Cooks (273) First-Line Supervisors of Food Preparation and Serving Workers (1,642) 	2,455	-2,409
Lodging Management-130720	26	<ul style="list-style-type: none"> Food Service Managers (540) Lodging Managers (49) 	589	-563
Resort and Club Management-130730	2	<ul style="list-style-type: none"> Lodging Managers (49) Gaming Managers (15) 	64	-62
Unassigned				
Fitness Trainer-083520	11	<ul style="list-style-type: none"> Fitness Trainers and Aerobics Instructors (661) 	661	-649
Other Engineering and Related Industrial Technologies-099900	3	<ul style="list-style-type: none"> Engineering Technicians, Except Drafters, All Other (70) Industrial Engineering Technicians (39) 	109	-106
Technical Theater-100600	2	<ul style="list-style-type: none"> Sound Engineering Technicians (10) 	10	-8
Applied Design-100900	5	<ul style="list-style-type: none"> Commercial and Industrial Designers (32) Graphic Designers (263) 	295	-290
Paralegal-140200	54	<ul style="list-style-type: none"> Title Examiners, Abstractors, and Searchers (46) Legal Support Workers, All Other (38) Paralegals and Legal Assistants (260) Court Reporters (25) Legal Secretaries (148) 	516	-462
Library Technician (Aide)-160200	8	<ul style="list-style-type: none"> Library Technicians (166) 	166	-158

Program Title - TOP	Annual average credentials awarded, 2015-18	Crosswalked Occupations (Annual Job Openings)	Combined Annual Job Openings	Potential Workforce Deficit/Surplus
Human Services-210400	75	<ul style="list-style-type: none"> Community Health Workers (63) Social and Human Service Assistants (626) 	689	-614
Legal and Community Interpretation-214000	29	<ul style="list-style-type: none"> Interpreters and Translators (93) 	93	-64
Other				
Other Business and Management-059900	2	<ul style="list-style-type: none"> None 		2
Journalism-060200	18	<ul style="list-style-type: none"> None 		18
Other Media and Communications-069900	2	<ul style="list-style-type: none"> None 		2
Database Design and Administration-070720	1	<ul style="list-style-type: none"> None 		1
Coaching-083560	5	<ul style="list-style-type: none"> None 		5
Upholstery Repair - Automotive-094910	3	<ul style="list-style-type: none"> None 		3
Physicians Assistant-120600	13	<ul style="list-style-type: none"> None 		13
Interior Design and Merchandising-130200	13	<ul style="list-style-type: none"> None 		13
Fashion Merchandising-130320	7	<ul style="list-style-type: none"> None 		7
Fashion Production-130330	4	<ul style="list-style-type: none"> None 		4
Child Development Administration and Management-130580	11	<ul style="list-style-type: none"> None 		11
Other Public and Protective Services-219900	94	<ul style="list-style-type: none"> None 		94
Vocational ESL-493100	1	<ul style="list-style-type: none"> None 		1