

Appendix A: Post-secondary opportunities in Ohio

While many post-secondary plus occupations are projected to decline, there are some occupations that are projected to remain robust through 2018. This list uses BLS job projection data from the Ohio Department of Jobs and Family Services. Educational pathways rely on the average degree or training found within the occupation, as designated in the BLS projections.

The list has been screened to show occupations that are projected to have more than 50 openings annually (2008-2018) and an entry hourly wage of at least \$10, and that do not require a four-year college degree. Managerial and supervisory positions that offer require extensive job experience have also been eliminated.

Summary		
Industry	Average annual openings	Average hourly wage (2009 dollars)
Health Care	12,836	\$19.25
Office and Administrative	9,749	\$16.72
Production and Manufacturing	4,553	\$15.93
Sales and Related	4,344	\$24.25
Construction and Extraction	3,993	\$21.00
Installation, Maintenance, and Repair	3,835	\$20.53
Protective Service	1,864	\$23.12
Business and Financial	1,349	\$24.64
Transportation and Materials Moving	519	\$18.48
Architecture and Engineering	431	\$23.35
Other Occupations	5,362	\$17.60
Industry Totals	48,835	\$20.44

Health care				
Code	Occupation title	Average annual openings	Average wage (2009 dollars)	Educational pathway
29-1111	Registered Nurses	4,175	\$28.72	Associate Degree
29-2061	Licensed Practical & Licensed Vocat. Nurses	2,022	\$19.19	Postsecondary Vocational Award
31-1012	Nursing Aides, Orderlies, and Attendants	1,949	\$11.57	Postsecondary Vocational Award
31-9092	Medical Assistants	889	\$13.16	Moderate-Term On-The-Job Training
29-2052	Pharmacy Technicians	760	\$12.52	Moderate-Term On-The-Job Training
31-9091	Dental Assistants	438	\$15.54	Moderate-Term On-The-Job Training
29-2021	Dental Hygienists	323	\$29.82	Associate Degree
29-2034	Radiologic Technologists and Technicians	264	\$23.91	Associate Degree
29-2041	Emergency Medical Technicians & Paramedics	235	\$13.45	Postsecondary Vocational Award
31-2021	Physical Therapist Assistants	220	\$24.61	Associate Degree
29-2071	Medical Records & Health Info. Technicians	210	\$15.31	Associate Degree
29-2099	Health Technologists & Technicians, All Other	194	\$18.87	Postsecondary Vocational Award
29-1126	Respiratory Therapists	182	\$24.04	Associate Degree
29-2055	Surgical Technologists	158	\$18.59	Postsecondary Vocational Award
29-2056	Veterinary Technologists and Technicians	147	\$14.13	Associate Degree
29-2012	Medical and Clinical Laboratory Technicians	131	\$18.47	Associate Degree
31-9011	Massage Therapists	118	\$15.23	Postsecondary Vocational Award
31-2011	Occupational Therapist Assistants	108	\$24.66	Associate Degree
31-9094	Medical Transcriptionists	87	\$15.02	Postsecondary Vocational Award
29-2081	Opticians, Dispensing	79	\$16.47	Long-Term On-The-Job Training
29-2032	Diagnostic Medical Sonographers	75	\$27.37	Associate Degree
29-2031	Cardiovascular Technologists and Technicians	72	\$22.91	Associate Degree

Office and Administrative				
Code	Occupation Title	Average Annual Openings	Average Wage (2009 dollars)	Educational Pathway
43-4051	Customer Service Representatives	3,644	\$15.56	Moderate-Term On-The-Job Training
43-6013	Medical Secretaries	1,278	\$13.72	Moderate-Term On-The-Job Training
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1,221	\$15.87	Moderate-Term On-The-Job Training
43-6011	Executive Secretaries & Administrative Assistants	924	\$19.90	Work Experience in a Related Occupation
43-6014	Secretaries, except Legal, Medical & Executive	864	\$14.66	Moderate-Term On-The-Job Training
43-5061	Production, Planning, and Expediting Clerks	322	\$19.52	Moderate-Term On-The-Job Training
43-9021	Data Entry Keyers	282	\$12.86	Moderate-Term On-The-Job Training
43-6012	Legal Secretaries	183	\$17.90	Associate Degree
43-3051	Payroll and Timekeeping Clerks	169	\$16.92	Moderate-Term On-The-Job Training
43-9041	Insurance Claims and Policy Processing Clerks	165	\$16.77	Moderate-Term On-The-Job Training
43-5032	Dispatchers, except Police, Fire and Ambulance	149	\$17.73	Moderate-Term On-The-Job Training
43-5031	Police, Fire, and Ambulance Dispatchers	128	\$17.57	Moderate-Term On-The-Job Training
43-5011	Cargo and Freight Agents	101	\$17.63	Moderate-Term On-The-Job Training
43-3061	Procurement Clerks	91	\$16.37	Moderate-Term On-The-Job Training
43-4141	New Accounts Clerks	90	\$14.42	Work Experience in a Related Occupation
43-4061	Eligibility Interviewers, Government Programs	84	\$18.79	Moderate-Term On-The-Job Training
43-4011	Brokerage Clerks	54	\$18.00	Moderate-Term On-The-Job

Production and Manufacturing Occupations

Code	Occupation Title	Average Annual Openings	Average Wage (2009 dollars)	Educational Pathway
51-9061	Inspectors/Testers/Sorters/Samplers/Weighers	402	\$16.76	Moderate-Term On-The-Job Training
51-4031	Cutting/Punching/Press Machine S/O/T, M/P	383	\$14.67	Moderate-Term On-The-Job Training
51-9199	Production Workers, All Other	347	\$16.24	Moderate-Term On-The-Job Training
51-4072	Molding/Coremaking/Casting Mach. S/O/T, M/P	279	\$14.26	Moderate-Term On-The-Job Training
51-4011	Computer-Controlled Machine Tool Oper, M/P	260	\$17.14	Moderate-Term On-The-Job Training
51-4122	Welding/Soldering/Brazing Machine Setters, O/T	224	\$16.31	Postsecondary Vocational Award
51-9023	Mixing/Blending Mach. Setter/Operator/Tenders	220	\$17.08	Moderate-Term On-The-Job Training
51-9041	Extrud/Form/Pressing/Compacting Mach. S/O/T	194	\$14.25	Moderate-Term On-The-Job Training
51-5023	Printing Machine Operators	191	\$16.15	Moderate-Term On-The-Job Training
51-9121	Coating/Painting/Spraying Machine Setters, O/T	181	\$15.06	Moderate-Term On-The-Job Training
51-3021	Butchers and Meat Cutters	165	\$14.24	Long-Term On-The-Job Training
51-3011	Bakers	164	\$11.37	Long-Term On-The-Job Training
51-8031	Water/Liquid Waste Treatment Plant/System Op.	145	\$20.03	Long-Term On-The-Job Training
51-4021	Extruding & Drawing Machine Setters, O/T, M/P	137	\$16.12	Moderate-Term On-The-Job Training
51-4199	Metal Workers and Plastic Workers, All Other	125	\$15.53	Moderate-Term On-The-Job Training
51-9196	Paper Goods Mach. Setters/Operators/Tenders	120	\$15.46	Moderate-Term On-The-Job Training
51-7011	Cabinetmakers and Bench Carpenters	118	\$14.19	Long-Term On-The-Job Training
51-4191	Heat Treating Equip. Setters, O/T, M/P	106	\$16.27	Moderate-Term On-The-Job Training
51-4033	Grind/Lapping/Polish/Buff Mach.Tool S/O/T, M/P	105	\$15.63	Moderate-Term On-The-Job Training
51-4081	Multiple Machine Tool Setters, O/T, M/P	100	\$17.19	Moderate-Term On-The-Job Training
51-2041	Structural Metal Fabricators and Fitters	85	\$16.97	Moderate-Term On-The-Job Training
51-9032	Cutting/Slicing Mach. Setters/Operators/Tenders	78	\$14.36	Moderate-Term On-The-Job Training
51-9195	Molders/Shapers/Casters, ex. Metal & Plastic	77	\$15.27	Moderate-Term On-The-Job Training
51-7042	Woodworking Machine Setters, O/T, ex. Sawing	69	\$12.28	Moderate-Term On-The-Job Training

Production continued				
Code	Occupation Title	Average Annual Openings	Average Wage (2009 dollars)	Educational Pathway
51-4034	Lathe & Turning Machine Tool Setters, O/T, M/P	64	\$16.15	Moderate-Term On-The-Job Training
51-4051	Metal-Refining Furnace Operators and Tenders	55	\$19.54	Moderate-Term On-The-Job Training
51-4193	Plating & Coating Machine Setters, O/T, M/P	54	\$13.83	Moderate-Term On-The-Job Training
51-4023	Rolling Machine Setters/Operators/Tenders, M/P	53	\$16.71	Moderate-Term On-The-Job Training
51-4111	Tool and Die Makers	52	\$22.93	Long-Term On-The-Job Training
Sales and Related Occupations				
41-4012	Sales Rep., Wholesale/Mfg., ex. Tech./Sci. Prod.	1,646	\$28.29	Work Experience in a Related Occupation
41-3021	Insurance Sales Agents	840	\$27.50	Postsecondary Vocational Award
41-4011	Sales Rep., Wholesale & Mfg., Tech./Sci. Prod.	647	\$37.37	Work Experience in a Related Occupation
41-3099	Sales Representatives, Services, All Other	602	\$24.89	Work Experience in a Related Occupation
41-9099	Sales and Related Workers, All Other	198	\$19.81	Moderate-Term On-The-Job Training
41-9022	Real Estate Sales Agents	176	\$23.66	Postsecondary Vocational Award
41-3011	Advertising Sales Agents	124	\$21.59	Moderate-Term On-The-Job Training
41-9011	Demonstrators and Product Promoters	111	\$10.91	Moderate-Term On-The-Job Training
Construction and Extraction Occupations				
47-2031	Carpenters	789	\$19.39	Long-Term On-The-Job Training
47-2111	Electricians	681	\$23.16	Long-Term On-The-Job Training
47-2061	Construction Laborers	552	\$18.50	Moderate-Term On-The-Job Training
47-2152	Plumbers, Pipefitters and Steamfitters	390	\$23.51	Long-Term On-The-Job Training
47-4051	Highway Maintenance Workers	288	\$17.45	Moderate-Term On-The-Job Training
47-2073	Operating Engineers & Other Con. Equip. Op.	244	\$23.96	Moderate-Term On-The-Job Training
47-2141	Painters, Construction and Maintenance	195	\$18.99	Moderate-Term On-The-Job Training
47-2021	Brickmasons and Blockmasons	181	\$24.04	Long-Term On-The-Job Training
47-2051	Cement Masons and Concrete Finishers	167	\$20.16	Moderate-Term On-The-Job Training
47-2211	Sheet Metal Workers	109	\$21.78	Long-Term On-The-Job Training

Construction continued				
Code	Occupation Title	Average Annual Openings	Average Wage (2009 dollars)	Educational Pathway
47-2181	Roofers	103	\$18.36	Moderate-Term On-The-Job Training
47-4011	Construction and Building Inspectors	88	\$23.46	Work Experience in a Related Occupation
47-2121	Glaziers	77	\$20.44	Long-Term On-The-Job Training
47-4099	Construction and Related Workers, All Other	66	\$16.63	Moderate-Term On-The-Job Training
47-2221	Structural Iron and Steel Workers	63	\$25.19	Long-Term On-The-Job Training
Installation, Maintenance, and Repair				
49-9042	Maintenance and Repair Workers, General	1,139	\$17.38	Moderate-Term On-The-Job Training
49-3023	Automotive Service Technicians and Mechanics	547	\$17.35	Postsecondary Vocational Award
49-9021	Heating, AC, & Refrigeration Mechanics/Installers	458	\$22.25	Postsecondary Vocational Award
49-3031	Bus & Truck Mechanics & Diesel Engine Spec.	324	\$18.89	Postsecondary Vocational Award
49-9041	Industrial Machinery Mechanics	226	\$23.37	Long-Term On-The-Job Training
49-3021	Automotive Body and Related Repairers	185	\$18.74	Long-Term On-The-Job Training
49-9051	Electrical Power-Line Installers and Repairers	138	\$24.58	Long-Term On-The-Job Training
49-2022	Telecomm. Equip. Install/Repair, ex. Line Install	120	\$25.90	Postsecondary Vocational Award
49-9099	Installation/Maintenance/Repair Workers, AO	94	\$16.88	Moderate-Term On-The-Job Training
49-9062	Medical Equipment Repairers	92	\$23.74	Associate Degree
49-3042	Mobile Heavy Equip. Mechanics, ex. Engines	90	\$21.62	Long-Term On-The-Job Training
49-9091	Coin/Vending/Amusement Machine Serv/Repair	88	\$12.79	Moderate-Term On-The-Job Training
49-2011	Computer, ATM, & Office Machine Repairers	87	\$17.83	Postsecondary Vocational Award
49-9052	Telecommunications Line Installers & Repairers	83	\$20.54	Long-Term On-The-Job Training
49-2098	Security and Fire Alarm Systems Installers	56	\$15.87	Postsecondary Vocational Award
49-9044	Millwrights	55	\$27.38	Long-Term On-The-Job Training
49-2094	Electrical/Electronics Repair, Comm/Indus Equip.	53	\$23.85	Postsecondary Vocational Award

Protective Service Occupations				
Code	Occupation Title	Average Annual Openings	Average Wage (2009 dollars)	Educational Pathway
33-2011	Fire Fighters	796	\$19.79	Long-Term On-The-Job Training
33-3051	Police and Sheriff's Patrol Officers	641	\$25.11	Long-Term On-The-Job Training
33-3012	Correctional Officers and Jailers	308	\$18.79	Moderate-Term On-The-Job Training
33-3021	Detectives and Criminal Investigators	66	\$30.87	Work Experience in a Related Occupation
33-9021	Private Detectives and Investigators	53	\$21.03	Work Experience in a Related Occupation
Business and Financial				
13-1023	Purchasing Agents, ex. Whole, Retail, & Farm	412	\$27.50	Long-Term On-The-Job Training
13-1031	Claims Adjusters, Examiners and Investigators	306	\$27.94	Long-Term On-The-Job Training
13-1041	Compliance Off, ex. Agric, Con, Hlth/Safety, & Trans.	269	\$25.77	Long-Term On-The-Job Training
13-2072	Loan Officers	199	\$26.57	Moderate-Term On-The-Job Training
13-1022	Wholesale & Retail Buyers, ex. Farm Products	108	\$24.48	Long-Term On-The-Job Training
13-2082	Tax Preparers	55	\$15.60	Moderate-Term On-The-Job Training
Transportation and Materials Moving				
53-3022	Bus Drivers, School	210	\$13.29	Moderate-Term On-The-Job Training
53-3021	Bus Drivers, Transit and Intercity	98	\$20.01	Moderate-Term On-The-Job Training
53-4011	Locomotive Engineers	89	\$21.89	Moderate-Term On-The-Job Training
53-7032	Excavating & Loading Machine & Dragline Oper.	68	\$16.75	Moderate-Term On-The-Job Training
53-7021	Crane and Tower Operators	54	\$20.47	Long-Term On-The-Job Training

Architecture and Engineering				
Code	Occupation Title	Average Annual Openings	Average Wage (2009 dollars)	Educational Pathway
17-3013	Mechanical Drafters	82	\$22.19	Postsecondary Vocational Award
17-3029	Engineering Technicians, Exc. Drafters, AO	79	\$27.08	Associate Degree
17-3023	Electrical & Electronic Engineering Technicians	72	\$24.90	Associate Degree
17-3026	Industrial Engineering Technicians	71	\$22.66	Associate Degree
17-3011	Architectural and Civil Drafters	66	\$20.84	Postsecondary Vocational Award
17-3022	Civil Engineering Technicians	61	\$22.40	Associate Degree
Other Occupations				
39-5012	Hairdressers, Hairstylists and Cosmetologists	999	\$11.78	Postsecondary Vocational Award
15-1041	Computer Support Specialists	899	\$20.07	Associate Degree
25-2011	Preschool Teachers, except Special Education	747	\$10.64	Postsecondary Vocational Award
21-1093	Social and Human Service Assistants	426	\$13.27	Moderate-Term On-The-Job Training
25-3021	Self-Enrichment Education Teachers	303	\$20.41	Work Experience in a Related Occupation
27-2022	Coaches and Scouts	300	\$14.63	Long-Term On-The-Job Training
25-4031	Library Technicians	248	\$14.79	Postsecondary Vocational Award
27-2042	Musicians and Singers	246	\$26.28	Long-Term On-The-Job Training
15-1099	Computer Specialists, All Other	243	\$34.61	Associate Degree
39-9031	Fitness Trainers and Aerobics Instructors	232	\$12.70	Postsecondary Vocational Award
23-2011	Paralegals and Legal Assistants	192	\$21.25	Associate Degree
27-4021	Photographers	152	\$14.55	Long-Term On-The-Job Training
27-1025	Interior Designers	73	\$20.27	Associate Degree
39-5092	Manicurists and Pedicurists	71	\$11.07	Postsecondary Vocational Award
19-4031	Chemical Technicians	64	\$20.23	Associate Degree
19-4099	Life, Physical, & Social Science Tech., All Other	59	\$21.81	Associate Degree
27-1026	Merchandise Displayers and Window Trimmers	58	\$13.18	Moderate-Term On-The-Job Training
39-5094	Skin Care Specialists	50	\$15.18	Postsecondary Vocational Award