



# Key Demand Occupations – 2012 – Michigan

## College Degree Required

Education	Title / Description / Key Skills	Projected Job Growth	% Job Growth 2002 - 2012	Hourly Wage
<b>Management Occupations</b>				
<b>General and Operations Managers (11-1021)</b>				
	Plan, direct, or coordinate the operations of companies or public and private sector organizations. Duties and responsibilities include formulating policies, managing daily operations, and planning the use of materials and human resources, but are too diverse and general in nature to be classified in any one functional area of management or administration, such as personnel, purchasing, or administrative services. Includes owners and managers who head small business establishments whose duties are primarily managerial.	<b>4,940</b>	<b>12.3%</b>	<b>\$44.66</b>
Work Exp. + Bachelor's	<b>Key Skills:</b> Active Listening, Management of Personnel Resources, Time Management, Decision Making, Monitoring			
<b>Sales Managers (11-2022)</b>				
	Direct the actual distribution or movement of a product or service to the customer. Coordinate sales distribution by establishing sales territories, quotas, and goals and establish training programs for sales representatives. Analyze sales statistics gathered by staff to determine sales potential and inventory requirements and monitor the preferences of customers.	<b>2,300</b>	<b>26.3%</b>	<b>\$44.52</b>
Work Exp. + Bachelor's	<b>Key Skills:</b> Active Listening, Speaking, Mathematics, Time Management, Service Orientation			
<b>Computer and Information Systems Managers (11-3021)</b>				
	Plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systems analysis, and computer programming.	<b>2,085</b>	<b>28.5%</b>	<b>\$46.35</b>
Work Exp. + Bachelor's	<b>Key Skills:</b> Reading Comprehension, Critical Thinking, Active Listening, Judgment & Decision Making, Active Learning			
<b>Medical and Health Services Managers (11-9111)</b>				
	Plan, direct, or coordinate medicine and health services in hospitals, clinics, managed care organizations, public health agencies, or similar organizations.	<b>1,625</b>	<b>22.3%</b>	<b>\$36.88</b>
Work Exp. + Bachelor's	<b>Key Skills:</b> Active Listening, Reading Comprehension, Critical Thinking, Monitoring, Speaking			
<b>Professional Occupations</b>				
<b>Training and Development Specialists (13-1073)</b>				
	Conduct training and development programs for employees.	<b>1,540</b>	<b>22.7%</b>	<b>\$25.86</b>
Bachelor's	<b>Key Skills:</b> Active Listening, Speaking, Time Management, Reading Comprehension, Writing			
<b>Management Analysts (13-1111)</b>				
	Conduct organizational studies and evaluations, design systems and procedures, conduct work simplifications and measurement studies, and prepare operations and procedures manuals to assist management in operating more efficiently and effectively. Includes program analysts and management consultants.	<b>2,710</b>	<b>24.9%</b>	<b>\$38.42</b>
Work Exp. + Bachelor's	<b>Key Skills:</b> Critical Thinking, Judgment & Decision Making, Active Listening, Coordination, Time Management			
<b>Accountants and Auditors (13-2011)</b>				
	Examine, analyze, and interpret accounting records for the purpose of giving advice or preparing statements. Install or advise on systems of recording costs or other financial and budgetary data.	<b>5,205</b>	<b>14.4%</b>	<b>\$27.38</b>
Bachelor's	<b>Key Skills:</b> Mathematics, Active Listening, Critical Thinking, Monitoring, Judgment & Decision Making			
<b>Loan Officers (13-2072)</b>				
	Evaluate, authorize, or recommend approval of commercial, real estate, or credit loans. Advise borrowers on financial status and methods of payments. Includes mortgage loan officers and agents, collection analysts, loan servicing officers, and loan underwriters.	<b>1,210</b>	<b>18.3%</b>	<b>\$25.19</b>
Bachelor's	<b>Key Skills:</b> Active Listening, Time Management, Reading Comprehension, Persuasion, Speaking			
<b>Computer Software Engineers, Applications (15-1031)</b>				
	Develop, create, and modify general computer applications software or specialized utility programs. Analyze user needs and develop software solutions. Design software or customize software for client use with the aim of optimizing operational efficiency. May analyze and design databases within an application area, working individually or coordinating database development as part of a team.	<b>3,510</b>	<b>36.5%</b>	<b>\$35.73</b>
Bachelor's	<b>Key Skills:</b> Programming, Critical Thinking, Complex Problem Solving, Active Listening, Troubleshooting			
<b>Computer Support Specialists (15-1041)</b>				
	Provide technical assistance to computer system users. Answer questions or resolve computer problems for clients in person, via telephone or from remote location. May provide assistance concerning the use of computer hardware and software, including printers.	<b>2,745</b>	<b>21.5%</b>	<b>\$20.14</b>
Associate's	<b>Key Skills:</b> Troubleshooting, Reading Comprehension, Critical Thinking, Active Listening, Writing			

OJT = On-the-job Training

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	<b>Computer Systems Analysts (15-1051)</b>	<b>5,450</b>	<b>31.5%</b>	<b>\$34.51</b>
Bachelor's	Analyze science, engineering, business, and all other data processing problems for application to electronic data processing systems. Analyze user requirements, procedures, and problems to automate or improve existing systems and review computer system capabilities, workflow, and scheduling limitations. <b>Key Skills:</b> Active Learning, Reading Comprehension, Complex Problem Solving, Critical Thinking, Active Listening			
	<b>Network and Computer Systems Administrators (15-1071)</b>	<b>1,945</b>	<b>30.2%</b>	<b>\$28.24</b>
Bachelor's	Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet system or a segment of a network system. Maintain network hardware and software. Monitor network to ensure network availability to all system users and perform necessary maintenance to support network availability. <b>Key Skills:</b> Reading Comprehension, Troubleshooting, Active Listening, Complex Problem Solving			
	<b>Industrial Engineers (17-2112)</b>	<b>1,995</b>	<b>14.4%</b>	<b>\$33.72</b>
Bachelor's	Design, develop, test, and evaluate integrated systems for managing industrial production processes including human work factors, quality control, inventory control, logistics and material flow, cost analysis, and production coordination. <b>Key Skills:</b> Critical Thinking, Active Listening, Time Management, Reading Comprehension, Complex Problem Solving			
	<b>Mental Health and Substance Abuse Social Workers (21-1023)</b>	<b>935</b>	<b>26.4%</b>	<b>\$18.68</b>
Master's	Assess and treat individuals with mental, emotional, or substance abuse problems, including abuse of alcohol, tobacco, and/or other drugs. Activities may include individual and group therapy, crisis intervention, case management, client advocacy, prevention, and education. <b>Key Skills:</b> Active Listening, Social Perceptiveness, Critical Thinking, Speaking, Reading Comprehension			
	<b>Public Relations Specialists (27-3031)</b>	<b>1,675</b>	<b>25.2%</b>	<b>\$24.55</b>
Bachelor's	Engage in promoting or creating good will for individuals, groups, or organizations by writing or selecting favorable publicity material and releasing it through various communications media. May prepare and arrange displays, and make speeches. <b>Key Skills:</b> Writing, Critical Thinking, Reading Comprehension, Active Listening, Judgment & Decision Making			
<b>Health Care Occupations</b>				
	<b>Pharmacists (29-1051)</b>	<b>1,555</b>	<b>20.7%</b>	<b>\$43.40</b>
Doctor's	Dispense drugs prescribed by physicians and other health practitioners and provide information to patients about medications and their use. May advise physicians and other health practitioners on the selection, dosage, interactions, and side effects of medications. <b>Key Skills:</b> Active Listening, Speaking, Reading Comprehension, Mathematics, Science			
	<b>Physician Assistants (29-1071)</b>	<b>980</b>	<b>36.4%</b>	<b>\$34.52</b>
Bachelor's	Provide healthcare services typically performed by a physician, under the supervision of a physician. Conduct complete physicals, provide treatment, and counsel patients. May, in some cases, prescribe medication. Must graduate from an accredited education program for physician assistants. <b>Key Skills:</b> Active Listening, Active Learning, Speaking, Reading Comprehension, Critical Thinking			
	<b>Registered Nurses (29-1111)</b>	<b>14,870</b>	<b>18.9%</b>	<b>\$27.50</b>
Associate's	Assess patient health problems and needs, develop and implement nursing care plans, and maintain medical records. Administer nursing care to ill, injured, convalescent, or disabled patients. May advise patients on health maintenance and disease prevention or provide case management. Licensing or registration required. <b>Key Skills:</b> Active Listening, Reading Comprehension, Critical Thinking, Instructing, Speaking, Time Management			
	<b>Physical Therapists (29-1123)</b>	<b>1,350</b>	<b>27.3%</b>	<b>\$31.79</b>
Master's	Assess, plan, organize, and participate in rehabilitative programs that improve mobility, relieve pain, increase strength, and decrease or prevent deformity of patients suffering from disease or injury. <b>Key Skills:</b> Active Listening, Instructing, Time Management, Speaking, Critical Thinking			
	<b>Dental Hygienists (29-2021)</b>	<b>2,025</b>	<b>24.7%</b>	<b>\$26.62</b>
Associate's	Clean teeth and examine oral areas, head, and neck for signs of oral disease. May educate patients on oral hygiene, take and develop X-rays, or apply fluoride or sealants. <b>Key Skills:</b> Active Listening, Speaking, Reading Comprehension, Active Learning, Time Management			

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<b>Professional Occupations</b>				
	<b>Purchasing Agents, Except Wholesale, Retail and Farm (13-1023)</b>	<b>1,160</b>	<b>11.0%</b>	<b>\$28.32</b>
Work Exp. in Related Occupation	Purchase machinery, equipment, tools, parts, supplies, or services necessary for the operation of an establishment. Purchase raw or semi-finished materials for manufacturing. <b>Key Skills:</b> Speaking, Active Listening, Critical Thinking, Judgment & Decision Making, Reading Comprehension			
	<b>Claims Adjusters, Examiners, and Investigators (13-1031)</b>	<b>690</b>	<b>15.8%</b>	<b>\$25.59</b>
Long-Term OJT	Review settled claims to determine that payments and settlements have been made in accordance with company practices and procedures, ensuring that proper methods have been followed. Report overpayments, underpayments, and other irregularities. <b>Key Skills:</b> Reading Comprehension, Judgment & Decision Making, Active Listening, Time Management, Writing			
	<b>Cost Estimators (13-1051)</b>	<b>1,380</b>	<b>16.6%</b>	<b>\$29.34</b>
Work Exp. in Related Occupation	Prepare cost estimates for product manufacturing, construction projects, or services to aid management in bidding on or determining price of product or service. May specialize according to particular service performed or type of product manufactured. <b>Key Skills:</b> Active Listening, Reading Comprehension, Mathematics, Time Management, Writing			
	<b>Preschool Teachers, Except Special Education (25-2011)</b>	<b>1,875</b>	<b>25.6%</b>	<b>\$14.40</b>
Post-Secondary Vocational Training	Instruct children (normally up to 5 years of age) in activities designed to promote social, physical, and intellectual growth needed for primary school in preschool, day care center, or other child development facility. May be required to hold State certification. <b>Key Skills:</b> Active Listening, Instructing, Speaking, Reading Comprehension, Learning Strategies			
	<b>Self-Enrichment Education Teachers (25-3021)</b>	<b>2,040</b>	<b>38.3%</b>	<b>\$16.18</b>
Work Exp. in Related Occupation	Teach or instruct courses other than those that normally lead to an occupational objective or degree. Courses may include self-improvement, nonvocational, and nonacademic subjects. Teaching may or may not take place in a traditional educational institution. <b>Key Skills:</b> Instructing, Speaking, Active Listening, Learning Strategies, Social Perceptiveness			
<b>Health Care Occupations</b>				
	<b>Licensed Practical &amp; Licensed Vocational Nurses (29-2061)</b>	<b>1,720</b>	<b>9.5%</b>	<b>\$18.13</b>
Post-Secondary Vocational Training	Care for ill, injured, convalescent, or disabled persons in hospitals, nursing homes, clinics, private homes, group homes, and similar institutions. May work under the supervision of a registered nurse. Licensing required. <b>Key Skills:</b> Active Listening, Reading Comprehension, Time Management, Writing, Critical Thinking			
<b>Service Occupations</b>				
	<b>Fire Fighters (33-2011)</b>	<b>1,325</b>	<b>15.0%</b>	<b>\$17.63</b>
Long-Term OJT	Control and extinguish fires or respond to emergency situations where life, property, or the environment is at risk. Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster management. <b>Key Skills:</b> Active Listening, Coordination, Equipment Selection, Critical Thinking, Equipment Maintenance			
	<b>Police and Sheriff's Patrol Officers (33-3051)</b>	<b>3,175</b>	<b>17.4%</b>	<b>\$22.95</b>
Long-Term OJT	Maintain order, enforce laws and ordinances, and protect life and property in an assigned patrol district. Perform combination of following duties: patrol a specific area on foot or in a vehicle; direct traffic; issue traffic summonses; investigate accidents; apprehend and arrest suspects, or serve legal processes of courts. <b>Key Skills:</b> Judgment and Decision Making, Active Listening, Critical Thinking, Writing, Speaking			
	<b>Cooks, Restaurant (35-2014)</b>	<b>3,850</b>	<b>15.6%</b>	<b>\$9.50</b>
Long-Term OJT	Prepare, season, and cook soups, meats, vegetables, desserts, or other foodstuffs in restaurants. May order supplies, keep records and accounts, price items on menu, or plan menu. <b>Key Skills:</b> Active Listening, Reading Comprehension, Speaking, Active Learning, Instructing			
<b>Construction and Repair Occupations</b>				
	<b>Managers of Construction Trades &amp; Extraction Workers (47-1011)</b>	<b>2,115</b>	<b>11.8%</b>	<b>\$30.48</b>
Work Exp. in Related Occupation	Directly supervise and coordinate activities of construction or extraction workers. <b>Key Skills:</b> Coordination, Management of Personnel Resources, Time Management, Active Listening, Instructing			

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<b>Carpenters (47-2031)</b>				
		<b>5,540</b>	<b>14.5%</b>	<b>\$19.36</b>
Long-Term OJT	Construct, erect, install, or repair structures and fixtures made of wood, such as concrete forms; building frameworks, including partitions, joists, studding, and rafters; wood stairways, window and door frames, and hardwood floors. May also install cabinets, siding, drywall and batt or roll insulation. Includes brattice builders who build doors or brattices (ventilation walls or partitions) in underground passageways to control the proper circulation of air through the passageways and to the working places. <b>Key Skills:</b> Mathematics, Time Management, Active Listening, Critical Thinking, Judgment and Decision Making			
<b>Electricians (47-2111)</b>				
		<b>5,425</b>	<b>20.5%</b>	<b>\$25.99</b>
Long-Term OJT	Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that work is in accordance with relevant codes. May install or service streetlights, intercom systems, or electrical control systems. <b>Key Skills:</b> Installation, Active Listening, Reading Comprehension, Troubleshooting, Equipment Selection			
<b>Plumbers, Pipefitters, and Steamfitters (47-2152)</b>				
		<b>2,995</b>	<b>15.9%</b>	<b>\$23.69</b>
Long-Term OJT	Assemble, install, alter, and repair pipelines or pipe systems that carry water, steam, air, or other liquids or gases. May install heating and cooling equipment and mechanical control systems. <b>Key Skills:</b> Active Listening, Mathematics, Repairing, Troubleshooting, Complex Problem Solving			
<b>Managers of Mechanics, Installers, and Repairers (49-1011)</b>				
		<b>1,915</b>	<b>13.0%</b>	<b>\$28.21</b>
Work Exp. in Related Occupation	Supervise and coordinate the activities of mechanics, installers, and repairers Sample of job titles: Maintenance Supervisor, Maintenance Foreman, Production Crew Supervisor, Maintenance Manager, Crew Leader, Maintenance Planner, Airport Skilled Maintenance Supervisor, Electrical Supervisor, Facilities Manager <b>Key Skills:</b> Management of Personnel Resources, Reading Comprehension, Active Listening, Equipment Selection, Installation			
<b>Automotive Body and Related Repairers (49-3021)</b>				
		<b>1,025</b>	<b>10.3%</b>	<b>\$21.28</b>
Long-Term OJT	Repair and refinish automotive vehicle bodies and straighten vehicle frames. <b>Key Skills:</b> Equipment Selection, Repairing, Troubleshooting, Installation, Complex Problem Solving			
<b>Automotive Service Technicians and Mechanics (49-3023)</b>				
		<b>2,785</b>	<b>10.8%</b>	<b>\$18.92</b>
Post-Secondary Vocational Training	Diagnose, adjust, repair, or overhaul automotive vehicles. <b>Key Skills:</b> Troubleshooting, Repairing, Equipment Selection, Active Learning, Critical Thinking			
<b>Mobile Heavy Equipment Mechanics (49-3042)</b>				
		<b>620</b>	<b>18.0%</b>	<b>\$21.09</b>
Post-Secondary Vocational Training	Diagnose, adjust, repair, or overhaul mobile mechanical, hydraulic, and pneumatic equipment, such as cranes, bulldozers, graders, and conveyors, used in construction, logging, and surface mining. <b>Key Skills:</b> Troubleshooting, Repairing, Equipment Maintenance, Equipment Selection, Installation			
<b>HVAC Mechanics and Installers (49-9021)</b>				
		<b>1,805</b>	<b>27.0%</b>	<b>\$21.85</b>
Long-Term OJT	Install or repair heating, central air conditioning, or refrigeration systems, including oil burners, hot-air furnaces, and heating stoves. <b>Key Skills:</b> Troubleshooting, Repairing, Active Listening, Equipment Maintenance, Critical Thinking			
<b>Production Occupations</b>				
<b>Machinists (51-4041)</b>				
		<b>2,220</b>	<b>9.8%</b>	<b>\$19.21</b>
Long-Term OJT	Set up and operate a variety of machine tools to produce precision parts and instruments. Includes precision instrument makers who fabricate, modify, or repair mechanical instruments. May also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, shop mathematics, metal properties, layout, and machining procedures. <b>Key Skills:</b> Operation and Control, Operation Monitoring, Mathematics, Equipment Selection, Troubleshooting			
<b>Welders, Cutters, Solderers, and Brazers (51-4121)</b>				
		<b>1,815</b>	<b>11.0%</b>	<b>\$18.60</b>
Long-Term OJT	Use hand-welding, flame-cutting, hand soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products. <b>Key Skills:</b> Operation and Control, Equipment Selection, Active Listening, Mathematics, Operation Monitoring			

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