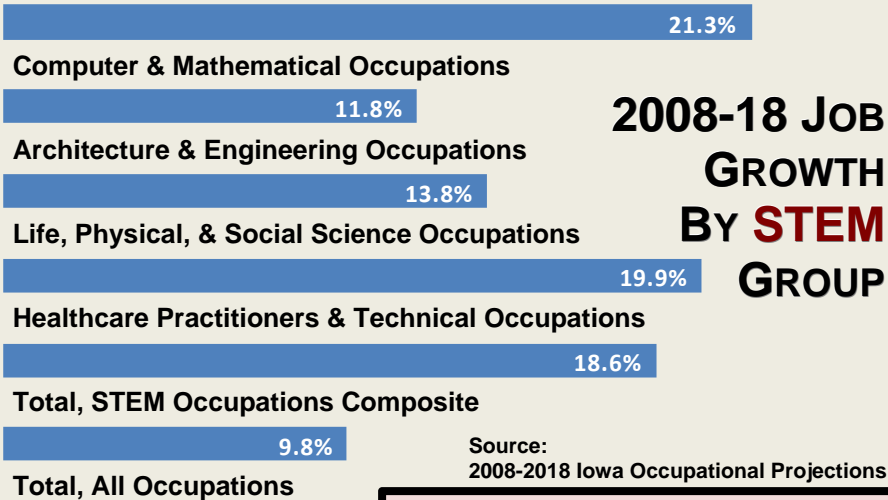


OCCUPATIONS

2008-2018

December 2011

Occupational Title	2008 Estimated Employment	2018 Projected Employment	Annual Growth Rate (%)	2011 Mean Hourly Wage*	2011 Mean Annual Salary	Education/Training Level**	Top Skills***
Total, All Occupations	1,762,260	1,934,875	1.0				
Computer and Mathematical Occupations	30,365	36,840	2.1				
Network Systems and Data Communications Analysts	2,625	4,050	5.4	\$32.20	\$66,972	5	SY2, B1, B2, C1, B3, B6, T6, B9, SY3
Computer Software Engineers, Applications	3,470	4,665	3.4	34.75	72,289	5	C1, T7, SY2, SY1, SY3
Computer Software Engineers, Systems Software	2,725	3,580	3.1	35.70	74,259	5	B3, B2, T7, B7, C1
Computer Systems Analysts	5,230	6,400	2.2	34.76	72,306	5	B3, B2, B7, B9, SY2
Actuaries	555	675	2.2	46.52	96,757	4	B5, B3, SY1, C1, B7
Network and Computer Systems Administrators	3,270	3,885	1.9	30.91	64,276	5	B3, B7, SY2, C1, SY1, B6, SY3
Database Administrators	735	870	1.8	34.87	72,523	5	C1, B3, B6, B1, B2, B7
Operations Research Analysts	810	955	1.8	30.18	62,786	3	B3, B5, C1, B7, SY1, SY2, SY3
Computer Support Specialists	4,995	5,710	1.4	21.45	44,626	6	B2, B9, B7, B3, B10
Computer Programmers	3,900	3,760	-0.3	31.58	65,689	5	T7, B7, C1, B3, B2, T8
Architecture and Engineering Occupations	18,115	20,250	1.2				
Civil Engineers	1,690	2,075	2.3	\$36.77	\$76,483	5	C1, B3, SY1, B5, T6, B7
Industrial Engineers	2,305	2,795	2.1	33.48	69,649	5	B7, B2, C1, B3, B10
Industrial Engineering Technicians	715	830	1.6	25.23	52,479	6	B3, C1, B6, B2, B7
Surveyors	480	555	1.6	25.57	53,191	5	B7, B5, B3, B9, B10
Civil Engineering Technicians	690	795	1.5	22.69	47,202	6	B7, B2, B3, B10, B9
Architects, Except Landscape and Naval	825	950	1.5	35.04	72,873	5	B2, B3, C1, B9, SY1, B7
Mechanical Engineers	2,375	2,610	1.0	36.13	75,149	5	C1, B3, B2, SY1, B5, B7
Electrical Engineers	1,255	1,340	0.7	37.68	78,393	5	B3, B7, B2, C1, B10
Architectural and Civil Drafters	875	915	0.5	22.41	46,619	7	B2, B3, SY1, B7, B9
Electrical and Electronic Engineering Technicians	1,090	1,100	0.1	24.05	50,029	6	C1, B7, R4, B2, B3, B9
Mechanical Drafters	955	950	-0.1	20.93	43,539	7	B1, B2, C1, B3, B5, B9
Life, Physical, and Social Science Occupations	14,135	16,085	1.4				
Medical Scientists, Except Epidemiologists	485	700	4.3	\$35.57	\$73,984	2	B8, B3, B7, C1, B9
Market Research Analysts	2,575	3,185	2.3	23.77	49,450	5	B7, B2, C1, B3, SY1, B9, B10
Environmental Scientists and Specialists, Including Health	860	1,040	2.1	30.85	64,166	3	B8, B3, B7, B9, B2, B10
Environmental Science and Protection Technicians, Including	465	535	1.5	23.94	49,778	6	B7, B2, C1, B9, B10
Food Scientists and Technologists	375	425	1.3	32.11	66,791	5	B2, B7, B10, B1, B3, B9
Biological Technicians	680	765	1.3	20.15	41,903	5	B7, B2, B3, B8, C1
Agricultural and Food Science Technicians	1,180	1,315	1.1	15.29	31,794	6	B7, B3, B10, B2, C1, SO1, B9
Chemists	485	525	0.8	32.08	66,724	5	B8, B7, B2, B3, C1, B9
Clinical, Counseling, and School Psychologists	1,345	1,450	0.8	32.38	67,365	2	B2, B7, SO6, B9, B10
Forest and Conservation Technicians	495	515	0.4	18.74	38,963	6	B3, B2, B7, SY1, B9
Soil and Plant Scientists	1,620	1,655	0.2	32.38	67,360	5	B8, B2, B3, B9, SY1, B7
Healthcare Practitioners and Technical Occupations	81,310	97,505	2.0				
Chiropractors	830	970	1.7	\$37.66	\$78,330	1	B2, B7, B3, B9, C1, R4
Physician Assistants	710	960	3.5	41.31	85,912	3	B2, B3, B9, B7, SY1, B6, SO6
Veterinary Technologists and Technicians	525	695	3.2	13.78	28,658	6	B3, B6, B2, B9, SO5
Dental Hygienists	1,890	2,480	3.1	31.25	65,005	6	B2, B9, B3, B7, SO6
Pharmacy Technicians	3,430	4,410	2.9	13.32	27,704	10	B2, B7, B9, B3, SO5, SO6
Veterinarians	1,105	1,395	2.7	34.50	71,755	1	B8, B2, B3, B9, SY1, B7
Physical Therapists	1,735	2,195	2.7	34.73	72,246	3	B2, B9, B7, B3, SO6, R4
Optometrists	460	560	2.3	51.07	106,219	1	B8, B2, B3, B9, SO1, B7, SO5
Occupational Therapists	880	1,075	2.2	32.44	67,491	3	B2, B7, B9, B3, SO5, SO6
Registered Nurses	32,245	39,330	2.2	25.43	52,887	6	SO6, B2, SO1, B9, B3, B7, SO5
Surgical Technologists	610	735	2.1	17.83	37,083	7	B6, SO1, T5, B2, B1, B9
Respiratory Therapists	920	1,110	2.1	22.84	47,508	6	B2, B3, B6, B9, B1, SO5, SO6
Family and General Practitioners	2,390	2,875	2.0	101.05	210,183	1	B2, B3, B9, B8, SO6
Occupational Health and Safety Specialists	480	575	2.0	29.25	60,832	5	B2, B9, B3, C1, SY1, SO6, B10
Licensed Practical and Licensed Vocational Nurses	7,655	9,130	1.9	17.77	36,966	7	B2, B9, B3, B7, SO1, SO5
Medical Records and Health Information Technicians	2,040	2,410	1.8	15.59	32,425	6	B2, B7, B9, B3, B6, R4
Radiologic Technologists and Technicians	2,595	3,020	1.6	22.52	46,843	6	B9, B2, T4, SO5, SO1, B6, T5, SO6
Pharmacists	2,885	3,315	1.5	47.91	99,651	1	B2, B7, B1, B3, B9
Recreational Therapists	470	540	1.5	18.94	39,403	5	B2, B9, SO5, SO6, SO1
Medical and Clinical Laboratory Technicians	1,405	1,605	1.4	17.98	37,407	6	B2, B3, B7, B8, T5, B9
Speech-Language Pathologists	1,075	1,205	1.3	29.82	62,015	3	B2, SO6, B9, B3, B7, B10
Dentists, General	1,210	1,350	1.2	99.19	206,330	1	B3, SY1, B2, B6, SO6, B9
Medical and Clinical Laboratory Technologists	1,665	1,815	0.9	25.46	52,957	5	B2, B8, B3, B7, SY1, B6, T8, B9
Dietitians and Nutritionists	785	855	0.9	23.82	49,551	5	B2, B9, B10, B3, SO1, B7, SO6
Opticians, Dispensing	955	1,040	0.9	13.72	28,529	9	B9, B2, B7, B1, B3, SO5, SO6
Emergency Medical Technicians and Paramedics	2,225	2,375	0.7	15.13	31,475	7	B3, SO5, B2, SO6, B9



Iowa's **STEM** occupational groups experience greater **Job Growth** and **Pay** than the combined total of **All Occupations!**



Legend/Methodology/Selection Criteria:

The acronym **STEM**, as used in this publication, is an amalgamated or combined *occupational group* made up of established occupational groups consisting of occupations demanding a preponderance of tools and skills from **Science, Technology, Engineering, and/or Mathematics**. These occupational groups, with the exception of STEM, were adopted from the Standard Occupational Classification Manual, Office of Management and Budget. Occupations (residual or undefined occupations were not included) are based on Iowa's 2008-2018 occupational projections with all STEM occupations found in either the Computer and Mathematical; Architecture and Engineering; Life, Physical, and Social Science; or Healthcare Practitioners and Technical occupational groups.

***Mean Wage**, also known as the average wage, is computed by dividing the estimated total wage for a reported occupation by its weighted employment; N.A. = Not Available; Compensation data based on 2011 Iowa Wage Survey unless otherwise noted; Missing compensation data may be derived from calculation or proration of reported wage/salary data if available. Occupations with limited or no compensation data (which inhibits either wage or salary calculated derivations) are subsequently omitted from any methodological calculations.

****Education/Training Level** provides categorically the most significant education or training pathway to employment for each occupation according to the U.S. Department of Labor's Bureau of Labor Statistics (BLS). There may be alternative pathways into an occupation, however, as well as additional educational, training, or licensing requirements. Iowa Workforce Development (IWD) will use Iowa requirements when available. The levels are as follows: 1 = First Professional degree; 2 = Doctoral degree; 3 = Master's degree; 4 = Bachelor's or higher degree, plus work experience; 5 = Bachelor's degree; 6 = Associate degree; 7 = Postsecondary vocational training; 8 = Work experience in a related occupation; 9 = Long-term on-the-job training; 10 = Moderate-term on-the-job training; 11 = Short-term on-the-job training.

*****Top Skills** refers to those skills identified through questionnaire responses by sampled workers and occupation experts by the U.S. Department of Labor's Occupational Information Network (O*NET) as being the top five (or more if tied) most important for a particular occupation. These include: **Basic Skills:** B1 = Active Learning; B2 = Active Listening; B3 = Critical Thinking; B4 = Learning Strategies; B5 = Mathematics; B6 = Monitoring; B7 = Reading Comprehension; B8 = Science; B9 = Speaking; B10 = Writing; **Complex Problem Solving Skills:** C1 = Complex Problem Solving; **Resource Management Skills:** R1 = Management of Financial Resources; R2 = Management of Material Resources; R3 = Management of Personnel Resources; R4 = Time Management; **Social Skills:** SO1 = Coordination; SO2 = Instructing; SO3 = Negotiation; SO4 = Persuasion; SO5 = Service Orientation; SO6 = Social Perceptiveness; **Systems Skills:** SY1 = Judgment and Decision Making; SY2 = Systems Analysis; SY3 = Systems Evaluation; and **Technical Skills:** T1 = Equipment Maintenance; T2 = Equipment Selection; T3 = Installation; T4 = Operation and Control; T5 = Operation Monitoring; T6 = Operations Analysis; T7 = Programming; T8 = Quality Control Analysis; T9 = Repairing; T10 = Technology Design; T11 = Troubleshooting.

Sources:

Education/Training Level: Bureau of Labor Statistics, U.S. Department of Labor; **Employment:** 2008-2018 Occupational Projections (based on 2008 annual employment data), Labor Market and Workforce Information Division, Iowa Workforce Development; **Skills:** Occupational Information Network (O*NET), Employment and Training Administration, U.S. Department of Labor; **Wages:** 2011 Iowa Wage Survey estimates, Labor Market and Workforce Information Division, Iowa Workforce Development. Estimates developed from the May 2010 Occupational Employment Statistics (OES) Wage Survey updated to the second quarter of 2011 using the Employment Cost Index.

This publication was produced by the Labor Market and Workforce Information Division of Iowa Workforce Development. Inquiries may be directed to Brent Paulson at 515.281.3439 or Brent.Paulson@iwd.iowa.gov. Visit <http://iwin.iowaworkforce.org> to obtain the latest workforce data and trends including this document under the **Publications** tab. Published 12/2011.