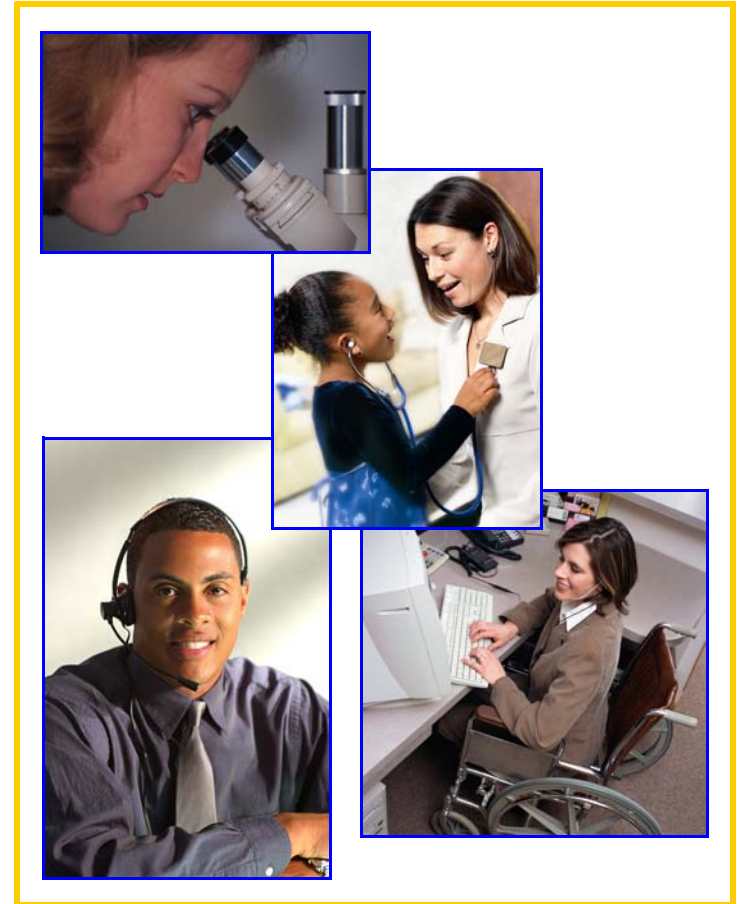


Pennsylvania's

# Career Clusters

Focusing Education  
On the Future



## Preface

Helping students with career information and planning can be a very exciting, challenging and rewarding process. Career development is an essential piece of a comprehensive education package for all students and is best planned as a life long process that begins in elementary school and extends throughout adulthood.

This booklet focuses on a sampling of careers within the 16 career clusters as listed below. This information can greatly assist students in focusing on vital career information as they plan for the future. Aligning specific careers within **Career Clusters** not only provides a context for learning but also helps students easily see a connection between what they learn within the classroom and the skills they need for success in their adult lives and the work world.

The 16 **Career Clusters** are as follows:



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Pennsylvania Department of Education  
[www.pde.state.pa.us/bcte](http://www.pde.state.pa.us/bcte)



**Focusing Education on the Future**  
[www.careerclusters.org](http://www.careerclusters.org)



**AGRICULTURE, FOOD AND NATURAL RESOURCES CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Professional Degree	Farm, Ranch & Other Agricultural Managers	\$49,200	\$23.65	10,000	6.0%	Less than Average
	Veterinarians	\$73,720	\$35.44	19,000	31.8%	Much Greater than Average
Bachelor's Degree	Environmental Engineers	\$63,440	\$30.50	14,000	26.0%	Greater than Average
	Foresters	\$48,060	\$23.11	1,000	7.0%	Less than Average
2-year Degree or Technical Training	Agricultural & Food Science Technicians	\$31,010	\$14.91	3,000	15.2%	Average
	Agricultural Inspectors	\$31,380	\$15.09	1,000	6.6%	Less than Average
	Agricultural Products Graders & Sorters	\$17,670	\$8.50	6,000	9.1%	Average
	Forest & Conservation Technicians	\$32,700	\$15.72	1,000	3.2%	Less than Average
	Purchasing Agents & Buyers, Farm Products	\$46,930	\$22.56	3,000	16.8%	Average
	Veterinary Technologists & Technicians	\$24,050	\$11.56	19,000	39.3%	Much Greater than Average
On-the-job Training	Earth Drillers, Except Oil & Gas	\$34,450	\$16.56	3,000	12.6%	Average
	Forest & Conservation Workers	\$22,730	\$10.93	1,000	3.9%	Less than Average
	Logging Equipment Operators	\$27,850	\$13.39	-1,000	-2.1%	Much Less than Average
	Nonfarm Animal Caretakers	\$18,750	\$9.01	28,000	21.6%	Average
	Pest Control Workers	\$26,180	\$12.58	13,000	22.1%	Average
	Pesticide Handlers, Sprayers & Applicators	\$25,960	\$12.48	4,000	13.6%	Average
	Power Plant Operators	\$49,110	\$23.61	1,000	1.8%	Less than Average
	Refuse & Recyclable Material Collectors	\$26,090	\$12.55	21,000	16.6%	Average
	Tree Trimmers & Pruners	\$26,870	\$12.92	8,000	16.3%	Average
	Veterinary Assistants & Laboratory Animal Caretakers	\$18,870	\$9.07	22,000	39.8%	Much Greater than Average
	Water & Liquid Waste Treatment Plant Operators	\$34,620	\$16.64	16,000	18.1%	Average



**ARCHITECTURE AND CONSTRUCTION CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Bachelor's Degree	Architects	\$62,530	\$30.06	19,000	18.5%	Average
	Civil Engineers	\$63,010	\$30.29	24,000	10.2%	Average
	Construction Managers	\$71,210	\$34.24	50,000	16.3%	Average
	Cost Estimators	\$51,310	\$24.67	35,000	16.5%	Average
	Industrial Engineers	\$63,590	\$30.57	7,000	4.5%	Less than Average
	Mechanical Engineers	\$65,170	\$31.33	29,000	13.1%	Average
2-year Degree or Technical Training	Architectural & Civil Drafters	\$39,060	\$18.78	21,000	20.8%	Average
	Civil Engineering Technicians	\$38,910	\$18.71	11,000	11.9%	Average
	Construction & Building Inspectors	\$43,070	\$20.71	11,000	15.0%	Average
	Electrical & Electronic Engineering Technicians	\$44,210	\$21.26	25,000	10.8%	Average
	Mechanical Drafters	\$43,080	\$20.71	11,000	15.4%	Average
On-the-job Training	Carpenters	\$36,840	\$17.71	98,000	8.2%	Average
	Carpet Installers	\$34,920	\$16.79	8,000	10.5%	Average
	Construction Laborers	\$28,570	\$13.73	135,000	17.0%	Average
	Electricians	\$43,910	\$21.11	120,000	17.3%	Average
	Highway Maintenance Workers	\$29,250	\$14.06	8,000	5.2%	Less than Average
	HVAC Mechanics & Installers	\$36,430	\$17.51	54,000	22.3%	Average
	Landscaping & Groundskeeping Workers	\$21,490	\$10.33	260,000	29.0%	Greater than Average
	Millwrights	\$42,630	\$20.50	3,000	3.9%	Less than Average
	Operating Engineers	\$38,320	\$18.42	25,000	6.9%	Less than Average
	Roofers	\$33,020	\$15.88	31,000	19.4%	Average
	Sheet Metal Workers	\$37,620	\$18.08	51,000	23.0%	Greater than Average



**ARTS, A/V TECHNOLOGY AND COMMUNICATIONS CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Professional Degree	Archivists, Curators & Museum Technicians	\$39,750	\$19.11	3,000	11.9%	Average
	Music Directors & Composers	\$39,270	(1)	6,000	13.1%	Average
	Producers & Directors	\$61,500	(1)	16,000	27.1%	Greater than Average
Bachelor's Degree	Editors	\$47,010	\$22.60	27,000	22.6%	Greater than Average
	Film & Video Editors	\$44,540	\$21.42	4,000	25.8%	Greater than Average
	Graphic Designers	\$41,380	\$19.89	51,000	26.7%	Greater than Average
	Multi-Media Artists & Animators	\$50,860	\$24.45	15,000	22.2%	Average
2-year Degree or Technical Training	Broadcast Technicians	\$34,200	\$16.44	4,000	10.2%	Average
	Desktop Publishers	\$33,730	\$16.21	25,000	66.7%	Much Greater than Average
	Telecommunications Equipment Installers & Repairers	\$45,550	\$21.90	-6,000	-3.1%	Much Less than Average
On-the-job Training	Actors	\$42,820	(1)	26,000	26.7%	Greater than Average
	Announcers	\$29,190	\$14.03	-4,000	-5.5%	Much Less than Average
	Audio & Video Equipment Technicians	\$36,550	\$17.57	6,000	16.8%	Average
	Audio/Visual Collections Specialists	\$35,370	\$17.01	2,000	13.6%	Average
	Dancers	\$27,390	\$13.17	3,000	17.3%	Average
	Fashion Designers	\$60,160	\$28.93	3,000	20.3%	Average
	Interior Designers	\$43,770	\$21.04	8,000	17.4%	Average
	Musicians & Singers	\$48,240	(1)	38,000	20.1%	Average
	Photographers	\$28,810	\$13.85	22,000	17.0%	Average
	Prepress Technicians & Workers	\$33,040	\$15.88	-17,000	-15.6%	Much Less than Average
	Printing Machine Operators	\$30,780	\$14.80	12,000	5.5%	Less than Average
	TV, Video & Motion Picture Camera Operators	\$36,880	\$17.73	7,000	25.8%	Greater than Average

(1) This occupation is generally not compensated at an hourly rate.



**BUSINESS, MANAGEMENT AND ADMINISTRATION CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Professional Degree	Administrative Services Managers	\$59,350	\$28.54	74,000	20.4%	Average
	General & Operations Managers	\$83,590	\$40.19	363,000	15.2%	Average
	Human Resources Managers	\$70,960	\$34.12	28,000	12.7%	Average
	Management Analysts	\$70,160	\$33.73	145,000	28.9%	Greater than Average
	Operations Research Analysts	\$60,890	\$29.27	4,000	8.0%	Average
	Public Relations Managers	\$69,870	\$33.59	27,000	36.3%	Much Greater than Average
Bachelor's Degree	Budget Analysts	\$55,470	\$26.67	10,000	14.6%	Average
	Compensation, Benefits & Job Analysis Specialists	\$47,920	\$23.04	14,000	15.7%	Average
	Employment, Recruitment & Placement Specialists	\$46,050	\$22.14	35,000	17.6%	Average
	Meeting & Convention Planners	\$41,020	\$19.72	8,000	23.3%	Greater than Average
	Public Relations Specialists	\$46,590	\$22.40	49,000	36.1%	Much Greater than Average
	Training & Development Specialists	\$46,000	\$22.11	40,000	19.4%	Average
2-year Degree or Technical Training	Supervisors - Office & Administrative Support Workers	\$42,060	\$20.22	130,000	9.4%	Average
	Medical Secretaries	\$26,690	\$12.83	60,000	19.0%	Average
On-the-job Training	Billing & Posting Clerks	\$27,120	\$13.04	43,000	8.5%	Average
	Bookkeeping, Accounting & Auditing Clerks	\$28,650	\$13.77	39,000	2.0%	Less than Average
	Data Entry Keyers	\$23,190	\$11.15	25,000	4.9%	Less than Average
	Executive Secretaries & Administrative Assistants	\$35,050	\$16.85	167,000	11.5%	Average
	Human Resources Assistants	\$31,530	\$15.16	34,000	19.3%	Average
	Interviewers, Except Eligibility & Loan	\$23,020	\$11.07	51,000	33.4%	Much Greater than Average
	Receptionists & Information Clerks	\$21,970	\$10.56	256,000	23.7%	Greater than Average
	Secretaries	\$26,390	\$12.69	-18,000	-1.0%	Much Less than Average
	Word Processors & Typists	\$27,830	\$13.38	-57,000	-19.1%	Much Less than Average



**EDUCATION AND TRAINING CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Professional Degree	Education Administrators	\$68,200	\$32.79	60,000	13.2%	Average
	Educational, Vocational & School Counselors	\$46,160	\$22.19	52,000	25.3%	Greater than Average
	Instructional Coordinators	\$49,510	\$23.80	20,000	25.0%	Greater than Average
	Postsecondary Teachers	\$53,290	(1)	10,400	17.3%	Average
Bachelor's Degree	Adult Literacy, & GED Teachers	\$41,470	\$19.94	13,000	19.4%	Average
	Elementary School Teachers	\$44,080	(1)	202,000	13.2%	Average
	Kindergarten Teachers	\$42,040	(1)	25,000	14.5%	Average
	Middle School Teachers	\$44,110	(1)	55,000	9.6%	Average
	Preschool Teachers	\$21,730	\$10.45	85,000	20.0%	Average
	Secondary School Teachers	\$46,010	(1)	187,000	18.6%	Average
	Special Education Teachers, Middle School	\$44,150	(1)	23,000	24.4%	Greater than Average
	Special Education Teachers, Preschool & Elementary School	\$45,510	(1)	86,000	36.8%	Much Greater than Average
	Special Education Teachers, Secondary School	\$47,270	(1)	30,000	24.6%	Greater than Average
	Vocational Education Teachers, Middle School	\$44,650	(1)	3,000	13.1%	Average
	Vocational Education Teachers, Secondary School	\$45,850	(1)	15,000	13.4%	Average
On-the-job Training	Teacher Assistants	\$19,930	(1)	301,000	23.9%	Greater than Average

(1) This occupation is generally not compensated at an hourly rate.



**FINANCE CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Professional Degree	Actuaries	\$80,780	\$38.84	1,000	5.4%	Less than Average
	Financial Managers	\$83,080	\$39.94	122,000	18.5%	Average
Bachelor's Degree	Credit Analysts	\$49,530	\$23.81	10,000	16.0%	Average
	Economists	\$76,180	\$36.62	4,000	18.5%	Average
	Financial Analysts	\$67,180	\$32.30	37,000	25.5%	Greater than Average
	Financial Examiners	\$61,570	\$29.60	3,000	10.2%	Average
	Insurance Sales Agents	\$53,800	\$25.86	13,000	3.3%	Less than Average
	Insurance Underwriters	\$50,940	\$24.49	2,000	2.0%	Less than Average
	Loan Counselors	\$36,450	\$17.52	5,000	16.0%	Average
	Loan Officers	\$52,160	\$25.08	12,000	4.9%	Less than Average
	Personal Financial Advisors	\$78,460	\$37.72	32,000	34.0%	Much Greater than Average
	Securities Sales Representatives	\$85,710	\$41.21	82,000	22.3%	Average
On-the-job Training	Bill & Account Collectors	\$28,330	\$13.62	101,000	25.3%	Greater than Average
	Brokerage Clerks	\$35,540	\$17.09	-1,000	-1.4%	Much Less than Average
	Claims Adjusters, Examiners & Investigators	\$45,990	\$22.11	29,000	15.1%	Average
	Credit Authorizers, Checkers & Clerks	\$28,960	\$13.92	4,000	4.1%	Less than Average
	Insurance Appraisers, Auto Damage	\$43,620	\$20.97	2,000	14.3%	Average
	Insurance Claims & Policy Processing Clerks	\$31,090	\$14.95	-58,000	-20.2%	Much Less than Average
	Loan Interviewers & Clerks	\$29,300	\$14.09	-38,000	-27.6%	Much Less than Average
	Tellers	\$20,750	\$9.97	-59,000	-11.8%	Much Less than Average
	Title Examiners, Abstractors & Searchers	\$37,300	\$17.93	0	1.0%	Less than Average



**GOVERNMENT AND PUBLIC ADMINISTRATION CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Professional Degree	Chief Executives	\$134,960	\$64.89	94,000	17.2%	Average
	Legislators	\$30,420	\$14.62	7,000	12.7%	Average
	Urban & Regional Planners	\$51,960	\$24.98	5,000	16.4%	Average
Bachelor's Degree	Accountants & Auditors	\$53,230	\$25.59	181,000	18.5%	Average
	Social & Community Service Managers	\$46,900	\$22.55	32,000	24.8%	Greater than Average
	Tax Examiners, Collectors & Revenue Agents	\$45,730	\$21.99	N/A	N/A	N/A
2-year Degree or Technical Training	Emergency Management Specialists	\$47,320	\$22.75	2,000	18.1%	Average
	Postmasters & Mail Superintendents	\$48,590	\$23.36	1,000	2.5%	Less than Average
On-the-job Training	Compliance Officers	\$48,450	\$23.29	12,000	8.9%	Average
	Court, Municipal & License Clerks	\$29,210	\$14.04	13,000	12.0%	Average
	Postal Service Clerks	\$38,930	\$18.72	2,000	2.4%	Less than Average
	Postal Service Mail Carriers	\$39,110	\$18.80	8,000	2.4%	Less than Average
	Postal Service Mail Sorters & Processors	\$35,080	\$16.86	-14,000	-4.9%	Much Less than Average



**HEALTH SCIENCE CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Professional Degree	Dentists	\$133,350	\$64.11	9,000	5.7%	Less than Average
	Pharmacists	\$75,140	\$36.13	53,000	24.3%	Greater than Average
	Physical Therapists	\$60,180	\$28.93	44,000	33.3%	Much Greater than Average
	Physicians & Surgeons	N/A	N/A	107,000	17.9%	Average
	Speech-Language Pathologists	\$51,490	\$24.75	34,000	39.2%	Much Greater than Average
Bachelor's Degree	Dietitians & Nutritionists	\$41,920	\$20.16	7,000	15.2%	Average
	Medical & Clinical Laboratory Technologists	\$43,670	\$21.00	25,000	17.0%	Average
	Occupational Therapists	\$53,040	\$25.50	27,000	33.9%	Much Greater than Average
	Physician Assistants	\$63,490	\$30.53	31,000	53.5%	Much Greater than Average
2-year Degree or Technical Training	Dental Hygienists	\$57,790	\$27.78	54,000	37.1%	Much Greater than Average
	Emergency Medical Technicians & Paramedics	\$26,570	\$12.78	54,000	31.3%	Much Greater than Average
	Licensed Practical & Licensed Vocational Nurses	\$32,300	\$15.53	142,000	20.3%	Average
	Medical & Clinical Laboratory Technicians	\$30,330	\$14.58	28,000	19.0%	Average
	Medical Records & Health Information Technicians	\$25,980	\$12.49	66,000	49.0%	Much Greater than Average
	Medical Transcriptionists	\$27,730	\$13.33	30,000	29.8%	Much Greater than Average
	Radiologic Technologists & Technicians	\$40,150	\$19.30	39,000	23.1%	Greater than Average
	Registered Nurses	\$49,840	\$23.96	561,000	25.6%	Greater than Average
	Respiratory Therapists	\$40,700	\$19.57	29,000	34.8%	Much Greater than Average
On-the-job Training	Dental Assistants	\$27,910	\$13.42	92,000	37.2%	Much Greater than Average
	Home Health Aides	\$19,050	\$9.16	291,000	47.3%	Much Greater than Average
	Medical Assistants	\$24,810	\$11.93	187,000	57.0%	Much Greater than Average
	Nursing Aides, Orderlies & Attendants	\$20,540	\$9.87	323,000	23.5%	Greater than Average
	Opticians	\$27,830	\$13.38	13,000	19.0%	Average
	Pharmacy Technicians	\$23,200	\$11.15	69,000	36.4%	Much Greater than Average



**HOSPITALITY AND TOURISM CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Bachelor's Degree	Recreation Workers	\$20,580	\$9.89	54,000	20.1%	Average
2-year Degree or Technical Training	Chefs & Head Cooks	\$32,000	\$15.38	12,000	9.0%	Average
	Concierges	\$23,680	\$11.39	3,000	15.7%	Average
	Food Service Managers	\$41,090	\$19.75	70,000	15.0%	Average
	Lodging Managers	\$38,110	\$18.32	6,000	9.3%	Average
	Supervisors - Food Preparation & Serving Workers	\$26,590	\$12.78	83,000	12.7%	Average
	Supervisors - Housekeeping & Janitorial Workers	\$30,430	\$14.63	31,000	14.2%	Average
	Travel Agents	\$28,370	\$13.64	4,000	3.2%	Less than Average
On-the-job Training	Amusement & Recreation Attendants	\$16,360	\$7.87	64,000	32.4%	Much Greater than Average
	Bakers	\$22,120	\$10.64	27,000	16.8%	Average
	Bartenders	\$16,900	\$8.12	52,000	13.4%	Average
	Combined Food Preparation & Serving Workers	\$15,150	\$7.28	673,000	30.5%	Much Greater than Average
	Cooks, Fast Food	\$14,930	\$7.18	-4,000	-0.7%	Much Less than Average
	Cooks, Institution & Cafeteria	\$19,190	\$9.23	35,000	7.6%	Less than Average
	Cooks, Restaurant	\$19,850	\$9.54	145,000	21.7%	Average
	Cooks, Short Order	\$17,130	\$8.24	14,000	6.8%	Less than Average
	Counter Attendants	\$16,090	\$7.74	61,000	14.4%	Average
	Dining Room & Cafeteria Attendants	\$15,330	\$7.37	-29,000	-6.7%	Much Less than Average
	Dishwashers	\$15,410	\$7.41	-42,000	-8.0%	Much Less than Average
	Hosts & Hostesses	\$16,130	\$7.76	45,000	13.0%	Average
	Hotel, Motel & Resort Desk Clerks	\$18,110	\$8.71	59,000	33.4%	Much Greater than Average
	Janitors & Cleaners	\$20,150	\$9.69	317,000	13.5%	Average
	Maids & Housekeeping Cleaners	\$17,330	\$8.33	83,000	5.1%	Less than Average
Waiters & Waitresses	\$15,770	\$7.58	364,000	18.3%	Average	



**HUMAN SERVICES CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Professional Degree	Clergy	\$36,080	\$17.35	26,000	15.0%	Average
	Marriage & Family Therapists	\$38,370	\$18.45	6,000	29.9%	Much Greater than Average
	Mental Health & Substance Abuse Social Workers	\$34,860	\$16.76	33,000	39.1%	Much Greater than Average
	Mental Health Counselors	\$32,800	\$15.77	15,000	21.7%	Average
	Rehabilitation Counselors	\$28,590	\$13.75	26,000	23.6%	Greater than Average
	Substance Abuse & Behavioral Disorder Counselors	\$31,860	\$15.32	21,000	35.0%	Much Greater than Average
Bachelor's Degree	Child, Family & School Social Workers	\$35,640	\$17.14	76,000	26.9%	Greater than Average
	Directors, Religious Activities & Education Programs	\$32,330	\$15.54	19,000	15.9%	Average
	Medical & Public Health Social Workers	\$38,920	\$18.71	33,000	31.6%	Much Greater than Average
	Social & Community Service Managers	\$46,900	\$22.55	32,000	24.8%	Greater than Average
2-year Degree or Technical Training	Barbers	\$22,390	\$10.77	-8,000	-11.5%	Much Less than Average
	Embalmers	\$36,160	\$17.38	0	-0.6%	Much Less than Average
	Funeral Directors	\$51,650	\$24.83	1,000	3.0%	Less than Average
	Hairdressers, Hairstylists & Cosmetologists	\$22,110	\$10.63	82,000	13.0%	Average
	Manicurists & Pedicurists	\$18,810	\$9.04	11,000	26.5%	Greater than Average
	Skin Care Specialists	\$25,650	\$12.33	3,000	13.3%	Average
On-the-job Training	Funeral Attendants	\$19,800	\$9.52	5,000	17.8%	Average
	Shampooers	\$15,190	\$7.30	3,000	13.2%	Average
	Child Care Workers	\$17,310	\$8.32	127,000	10.6%	Average
	Personal & Home Care Aides	\$16,790	\$8.07	258,000	62.5%	Much Greater than Average
	Residential Advisors	\$22,410	\$10.77	11,000	24.0%	Greater than Average
	Social & Human Service Assistants	\$25,040	\$12.04	147,000	54.2%	Much Greater than Average



**INFORMATION TECHNOLOGY CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Professional Degree	Computer & Information Systems Managers	\$90,440	\$43.48	150,000	47.9%	Much Greater than Average
Bachelor's Degree	Applications Software Engineers	\$73,800	\$35.48	380,000	100.0%	Much Greater than Average
	Computer Hardware Engineers	\$76,150	\$36.61	15,000	24.9%	Greater than Average
	Computer Programmers	\$63,690	\$30.62	95,000	16.2%	Average
	Computer Systems Analysts	\$64,890	\$31.20	258,000	59.7%	Much Greater than Average
	Database Administrators	\$59,080	\$28.41	70,000	65.9%	Much Greater than Average
	Network & Computer Systems Administrators	\$57,620	\$27.70	187,000	81.9%	Much Greater than Average
	Network Systems & Data Communications Analysts	\$61,390	\$29.51	92,000	77.5%	Much Greater than Average
	Systems Software Engineers	\$75,840	\$36.46	284,000	89.7%	Much Greater than Average
2-year Degree or Technical Training	Computer Support Specialists	\$42,320	\$20.35	490,000	97.0%	Much Greater than Average



**LEGAL, PUBLIC SAFETY AND SECURITY CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Professional Degree	Judges, Magistrate Judges & Magistrates	\$85,210	\$40.97	0	1.1%	Less than Average
	Lawyers	\$105,890	\$50.91	123,000	18.0%	Average
Bachelor's Degree	Law Clerks	\$32,070	\$15.42	4,000	13.2%	Average
	Probation Officers & Correctional Treatment Specialists	\$41,210	\$19.81	20,000	23.8%	Greater than Average
2-year Degree or Technical Training	Court Reporters	\$44,910	\$21.59	3,000	16.2%	Average
	Detectives & Criminal Investigators	\$52,960	\$25.46	15,000	16.4%	Average
	Fire Inspectors & Investigators	\$46,000	\$22.11	2,000	15.1%	Average
	Paralegals & Legal Assistants	\$40,590	\$19.51	62,000	33.2%	Much Greater than Average
	Private Detectives & Investigators	\$34,250	\$16.47	9,000	23.5%	Greater than Average
	Supervisors - Correctional Officers	\$47,000	\$22.59	9,000	29.6%	Greater than Average
	Supervisors - Fire Fighting & Prevention Workers	\$56,750	\$27.28	4,000	7.2%	Less than Average
On-the-job Training	Supervisors - Police & Detectives	\$61,650	\$29.64	16,000	13.1%	Average
	Bailiffs	\$34,250	\$16.47	2,000	12.5%	Average
	Correctional Officers & Jailers	\$34,650	\$16.66	134,000	32.4%	Much Greater than Average
	Crossing Guards	\$20,370	\$9.79	6,000	8.7%	Average
	Fire Fighters	\$37,530	\$18.04	23,000	8.9%	Average
	Police & Sheriff's Patrol Officers	\$43,390	\$20.86	141,000	23.2%	Greater than Average
	Police, Fire & Ambulance Dispatchers	\$28,900	\$13.89	12,000	14.5%	Average
Security Guards	\$21,060	\$10.13	391,000	35.4%	Much Greater than Average	



**MANUFACTURING CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Bachelor's Degree	Industrial Production Managers	\$72,980	\$35.09	16,000	6.2%	Less than Average
	Purchasing Agents	\$48,270	\$23.21	29,000	12.3%	Average
2-year Degree or Technical Training	Electrical & Electronic Engineering Technicians	\$44,210	\$21.26	25,000	10.8%	Average
	Industrial Engineering Technicians	\$45,310	\$21.79	5,000	10.1%	Average
	Supervisors - Mechanics, Installers & Repairers	\$50,030	\$24.05	71,000	16.0%	Average
	Supervisors - Production & Operating Workers	\$45,920	\$22.08	9,000	1.0%	Less than Average
	Welders, Cutters, Solderers & Brazers	\$30,820	\$14.82	86,000	19.3%	Average
On-the-job Training	Computer-Controlled Machine Tool Operators	\$30,310	\$14.57	32,000	19.7%	Average
	Cutting, Punching & Press Machine Oprs/Tenders	\$25,940	\$12.47	-15,000	-4.0%	Much Less than Average
	Electrical & Electronic Equipment Assemblers	\$24,640	\$11.84	-24,000	-6.3%	Much Less than Average
	Grinding, Polishing & Buffing Machine Tool Oprs/Tenders	\$28,070	\$13.49	11,000	7.3%	Less than Average
	Helpers--Production Workers	\$20,730	\$9.97	62,000	11.9%	Average
	Industrial Machinery Mechanics	\$39,410	\$18.95	7,000	3.4%	Less than Average
	Inspectors, Testers, Sorters, Samplers & Weighers	\$29,760	\$14.31	-11,000	-1.9%	Much Less than Average
	Machine Feeders & Offbearers	\$23,360	\$11.23	-22,000	-12.3%	Much Less than Average
	Machinists	\$33,410	\$16.06	39,000	9.1%	Average
	Machinery Maintenance Workers	\$33,750	\$16.23	7,000	5.8%	Less than Average
	Millwrights	\$42,630	\$20.50	3,000	3.9%	Less than Average
	Packaging & Filling Machine Oprs/Tenders	\$23,260	\$11.18	54,000	14.4%	Average
	Paper Goods Machine Oprs/Tenders	\$29,260	\$14.07	-7,000	-5.4%	Much Less than Average
	Sheet Metal Workers	\$37,620	\$18.08	51,000	23.0%	Greater than Average
	Team Assemblers	\$24,710	\$11.88	87,000	5.9%	Less than Average
	Tool & Die Makers	\$43,630	\$20.98	3,000	2.2%	Less than Average
Woodworking Machine Oprs/Tenders	\$23,160	\$11.13	5,000	5.3%	Less than Average	



**MARKETING, SALES AND SERVICE CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Professional Degree	Advertising & Promotions Managers	\$69,200	\$33.27	34,000	34.3%	Much Greater than Average
	Marketing Managers	\$87,170	\$41.91	55,000	29.1%	Greater than Average
	Purchasing Managers	\$66,250	\$31.85	-7,000	-5.5%	Much Less than Average
	Sales Managers	\$86,110	\$41.40	112,000	32.8%	Much Greater than Average
Bachelor's Degree	Sales Engineers	\$69,200	\$33.27	15,000	17.7%	Average
	Wholesale & Retail Buyers	\$46,650	\$22.43	-13,000	-8.7%	Much Less than Average
2-year Degree or Technical Training	Real Estate Sales Agents	\$42,470	\$20.42	32,000	9.5%	Average
	Supervisors - Non-Retail Sales Workers	\$64,270	\$30.90	25,000	5.8%	Less than Average
	Supervisors - Retail Sales Workers	\$34,770	\$16.72	168,000	8.1%	Average
On-the-job Training	Advertising Sales Agents	\$47,610	\$22.89	41,000	26.3%	Greater than Average
	Cashiers	\$16,680	\$8.02	474,000	14.2%	Average
	Counter & Rental Clerks	\$20,040	\$9.64	82,000	19.4%	Average
	Demonstrators & Product Promoters	\$25,360	\$12.19	29,000	24.9%	Greater than Average
	Door-To-Door, News & Street Vendors	\$30,120	\$14.48	-10,000	-6.2%	Much Less than Average
	Driver/Sales Workers	\$23,780	\$11.43	29,000	7.1%	Less than Average
	Merchandise Displayers & Window Trimmers	\$25,470	\$12.25	12,000	15.9%	Average
	Parts Salespersons	\$26,670	\$12.82	-12,000	-4.4%	Much Less than Average
	Retail Salespersons	\$21,750	\$10.46	510,000	12.4%	Average
	Sales Representatives	\$51,130	\$24.58	82,000	5.7%	Less than Average
	Sales Representatives, Technical & Scientific Products	\$63,460	\$30.51	30,000	7.5%	Less than Average
	Telemarketers	\$22,330	\$10.74	127,000	22.2%	Average



**SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Professional Degree	Engineering Managers	\$95,750	\$46.03	23,000	8.0%	Average
	Natural Sciences Managers	\$90,400	\$43.46	3,000	7.6%	Less than Average
Bachelor's Degree	Aerospace Engineers	\$74,110	\$35.63	7,000	13.9%	Average
	Chemical Engineers	\$75,010	\$36.06	1,000	4.1%	Less than Average
	Chemists	\$57,670	\$27.72	16,000	19.1%	Average
	Civil Engineers	\$63,010	\$30.29	24,000	10.2%	Average
	Electrical Engineers	\$70,480	\$33.88	18,000	11.3%	Average
	Electronics Engineers	\$71,600	\$34.43	14,000	10.4%	Average
	Environmental Scientists & Specialists	\$50,970	\$24.51	14,000	22.3%	Average
	Geoscientists	\$78,690	\$37.83	5,000	18.1%	Average
	Health & Safety Engineers	\$59,830	\$28.77	5,000	10.9%	Average
	Industrial Engineers	\$63,590	\$30.57	7,000	4.5%	Less than Average
	Materials Engineers	\$64,310	\$30.92	2,000	5.3%	Less than Average
	Materials Scientists	\$67,240	\$32.33	2,000	19.8%	Average
	Mechanical Engineers	\$65,170	\$31.33	29,000	13.1%	Average
	Nuclear Engineers	\$82,300	\$39.57	0	1.8%	Less than Average
	Petroleum Engineers	\$85,540	\$41.13	-1,000	-7.2%	Much Less than Average
Technical Writers	\$53,310	\$25.63	17,000	29.6%	Greater than Average	
2-year Degree or Technical Training	Avionics Technicians	\$42,410	\$20.39	2,000	9.8%	Average
	Biological Technicians	\$34,630	\$16.65	11,000	26.4%	Greater than Average
	Chemical Technicians	\$38,890	\$18.70	11,000	15.0%	Average
On-the-job Training	Surveying & Mapping Technicians	\$31,760	\$15.27	14,000	25.3%	Greater than Average



**TRANSPORTATION, DISTRIBUTION AND LOGISTICS CAREER CLUSTER**

Education Level	Occupation	2002 Mean Wage		2000-2010 Employment Change		Relative Growth Rate
		Annual	Hourly	Growth	Percent Change	
Bachelor's Degree	Airline Pilots, Copilots & Flight Engineers	\$122,230	(1)	6,000	6.4%	Much Less than Average
2-year Degree or Technical Training	Aircraft Mechanics & Service Technicians	\$43,620	\$20.97	26,000	16.7%	Average
	Automotive Service Technicians & Mechanics	\$32,830	\$15.79	151,000	18.0%	Average
	Bus & Truck Mechanics and Diesel Engine Specialists	\$35,380	\$17.01	40,000	14.2%	Average
	Mobile Heavy Equipment Mechanics	\$36,790	\$17.69	18,000	14.0%	Average
	Railroad Conductors & Yardmasters	\$49,280	\$23.69	-8,000	-18.9%	Much Less than Average
	Transportation, Storage & Distribution Managers	\$65,070	\$31.29	30,000	20.2%	Average
On-the-job Training	Air Traffic Controllers	\$88,090	\$42.35	2,000	7.2%	Less than Average
	Automotive Body & Related Repairers	\$35,200	\$16.93	20,000	10.2%	Average
	Cargo & Freight Agents	\$33,350	\$16.03	5,000	8.3%	Average
	Dispatchers	\$32,660	\$15.70	37,000	22.2%	Average
	Flight Attendants	\$50,460	(1)	23,000	18.4%	Average
	Industrial Truck & Tractor Operators	\$27,740	\$13.34	72,000	11.3%	Average
	Laborers and Freight, Stock & Material Movers	\$21,460	\$10.32	289,000	13.9%	Average
	School Bus Drivers	\$22,890	\$11.01	56,000	11.6%	Average
	Small Engine Mechanics	\$25,950	\$12.47	3,000	8.2%	Average
	Taxi Drivers & Chauffeurs	\$20,830	\$10.01	43,000	24.4%	Greater than Average
	Tire Repairers & Changers	\$21,730	\$10.45	6,000	6.8%	Less than Average
	Transit & Intercity Bus Drivers	\$30,810	\$14.81	32,000	17.4%	Average
	Truck Drivers, Heavy & Tractor-Trailer	\$34,350	\$16.52	346,000	19.8%	Average
	Truck Drivers, Light or Delivery Services	\$26,320	\$12.65	215,000	19.2%	Average

(1) This occupation is generally not compensated at an hourly rate.