

Occupational Profile: Medical and Clinical Laboratory Technician

GENERAL OCCUPATION DESCRIPTION

Perform routine medical laboratory tests for the diagnosis, treatment, and prevention of disease. May work under the supervision of a medical technologist.

Specific tasks include:

- Conduct chemical analyses of body fluids, such as blood and urine, using microscope or automatic analyzer to detect abnormalities or diseases, and enter findings into computer.
- Set up, adjust, maintain and clean medical laboratory equipment.
- Analyze the results of tests and experiments to ensure conformity to specifications, using special mechanical and electrical devices.
- Analyze and record test data to issue reports that use charts, graphs and narratives.
- Conduct blood tests for transfusion purposes and perform blood counts.
- Obtain specimens, cultivating, isolating and identifying microorganisms for analysis.
- Examine cells stained with dye to locate abnormalities.
- Collect blood or tissue samples from patients, observing principles of asepsis to obtain blood sample.
- Consult with a pathologist to determine a final diagnosis when abnormal cells are found.
- Inoculate fertilized eggs, broths, or other bacteriological media with organisms.

Source: O*NET online. <http://online.onetcenter.org>

REQUIRED EDUCATION

As shown in the table (right), 44.8% of surveyed employers reportedly required a high school diploma or less for this occupation, and 34.7% required a 2-year degree or the equivalent. Only 20.5% of employers required a 4-year degree.

Required Education	
Percent of Employers Requiring HS Diploma or Less	44.8%
Percent of Employers Requiring 2-Year Degree or Equiv	34.7%
Percent of Employers Requiring BS Diploma or More	20.5%

Source: Bureau of Labor Statistics

WAGES

Medical and Clinical Laboratory Technician is generally considered a medium to high-wage occupation, with good possibility for wage advancement with experience. This occupation is paid somewhat less in the Greater Phoenix MSA and Arizona as compared with the overall United States.

Location	Pay Period	2005				
		10%	25%	Median	75%	90%
United States	Hourly	\$9.95	\$12.18	\$15.24	\$18.99	\$23.00
	Yearly	\$20,700	\$25,300	\$31,700	\$39,500	\$47,800
Greater Phoenix MSA	Hourly	\$8.57	\$10.17	\$12.31	\$16.40	\$20.73
	Yearly	\$17,834	\$21,164	\$25,617	\$34,128	\$43,139
Arizona	Hourly	\$8.70	\$9.94	\$12.33	\$16.27	\$21.36
	Yearly	\$18,100	\$20,700	\$25,600	\$33,800	\$44,400

Source: Bureau of Labor Statistics

As shown in the table to right, a comparison of wages for this occupation by State reveals Arizona ranks 47^h in terms of median wages.

RANK	Location	Median Wage 2005	
		Hourly	Annual
1	Rhode Island	\$20.55	\$42,700
2	New Jersey	\$19.26	\$40,100
3	Alaska	\$19.21	\$40,000
4	Hawaii	\$18.20	\$37,900
5	Minnesota	\$17.44	\$36,300
47	ARIZONA	\$12.33	\$25,600

Source: Bureau of Labor Statistics

The table below provides a comparison of wages by industry for the Greater Phoenix MSA (2005). As shown, the two main employment sectors exhibit slightly differing wages, with hospitals paying more than other sectors.

Wages by Industry: Greater Phoenix MSA (2005)	Rounded Employment	Mean Wage	10th Percentile Wage	25th Percentile Wage	Median Wage	75th Percentile Wage	90th Percentile Wage
Ambulatory Health Care Services	660	\$11.83	\$7.76	\$9.17	\$10.81	\$14.11	\$17.09
Hospitals	450	\$15.39	\$9.37	\$11.16	\$13.80	\$18.68	\$24.37

EMPLOYMENT

As shown in the table below, this occupation has a projected 40% growth over 10 years (between 2003 and 2013) for the Greater Phoenix MSA. There is an average projected 176 job openings each year, comprised of 106 new jobs and 70 positions vacated by individuals leaving the field (due to retirement, death, career changes, or other reasons).

	10-YEAR CHANGE			AVERAGE ANNUAL		
	Employment		Percent Change	Job Openings	Growth	Separations
United States	2004	2014				
Medical and clinical laboratory technicians	146,600	183,300	25%	7,620	n/a	n/a
Arizona	Employment		Percent Change	Job Openings	Growth	Separations
	2002	2012				
Medical and clinical laboratory technicians	4,750	7,260	53%	380	n/a	n/a
Greater Phoenix MSA	Employment		Percent Change	Job Openings	Growth	Separations
	2003	2013				
Medical and clinical laboratory technicians	2,612	3,673	40%	176	106	70

Job Openings refers to the average annual job openings due to growth and net replacement.

Source: Bureau of Labor Statistics

An additional source of information regarding this occupation can be provided by analysis of employer survey data collected for the Maricopa County Community Colleges by the ERISS Corporation in 2004. As shown, the ERISS survey data shows a projected 1-year growth rate of 11%, which is higher than the average of 4% per year reflected by the BLS data above. However, the ERISS data could be considered more indicative of

the true trend, as it asks employers only to project 1 year out, and also interviewed more local employers than the BLS survey.

Additionally, the ERISS data provides an indicator of turnover for this occupation, which is reported to be 9%. This can be considered a low to moderate turnover rate for the industry.

ERISS Occupational Survey Data (2004)			
Greater Phoenix MSA	Growth	Turnover	Demand
Medical and clinical laboratory technicians	11.0%	9.0%	20.0%

Source: 2004 ERISS occupational survey

Comparison of employment projections for top five regions for Medical and Clinical Laboratory Technicians

As shown in the table to right, a statewide comparison reveals the State of Arizona ranks first in terms of projected 10-year growth for this occupation between 2002 and 2012 (53%).

RANK	Location	Employment		Percent Change
		2002	2012	
1	ARIZONA	4,750	7,260	53%
2	Utah	1,360	1,870	38%
3	Idaho	300	410	37%
4	Nevada	730	970	34%
5	Colorado	1,860	2,410	29%
5	New Hampshire	310	400	29%

Source: Bureau of Labor Statistics

Employment by Industry

The table below shows the industries that most commonly employ Medical and Clinical Laboratory Technicians, and the proportion of employment accounted for at the national level. As shown, General Medical & Surgical Hospitals account for the great majority of employment, followed by Offices of Physicians.

Percent of Employment Nationally by Industry	
Percent	Industry
35%	General Medical & Surgical Hospitals
17.7%	Offices of Physicians
13.2%	Medical and Diagnostic Laboratories
6%	Local Government Hospitals
4%	All Other Ambulatory Health Care Services
2.9%	State Governemtn Educational Services

Geo-Location Overlay of Employers with 50 or More Employees that Potentially Employ Occupation (n = 124)

