



KENTUCKY MEDICAL LABORATORY SCIENCE WORKFORCE REPORT



Center of Excellence
in Rural Health

2024

Occupations

According to the American Society for Clinical Pathology (ASCP), there are several roles MLS and MLT graduates can perform in a clinical lab setting. Laboratory professionals examine and analyze biological materials, prepare specimens for examination, test specimens, and explore the results (American Society for Clinical Pathology [ASCP], 2024).

- **Medical Laboratory Scientists (MLS)**

MLS employees conduct a full range of routine and complex tests in blood banking, chemistry, and hematology, immunology, microbiology, and molecular biology to provide information necessary for a pathologist to diagnose and treat diseases.

- **Cytologists**

Provide advanced diagnostic services and provide physician support by integrating morphologic interpretations with companion technologies.

- **Histotechnologists**

These individuals prepare and perform routine and complex histologic techniques on biological tissue samples for microscopic examination by a fully licensed and trained pathologist to diagnose diseases.

- **Histotechnicians**

These employees prepare and process tissue samples for microscopic examination by a pathologist.

- **Pathologists' Assistants**

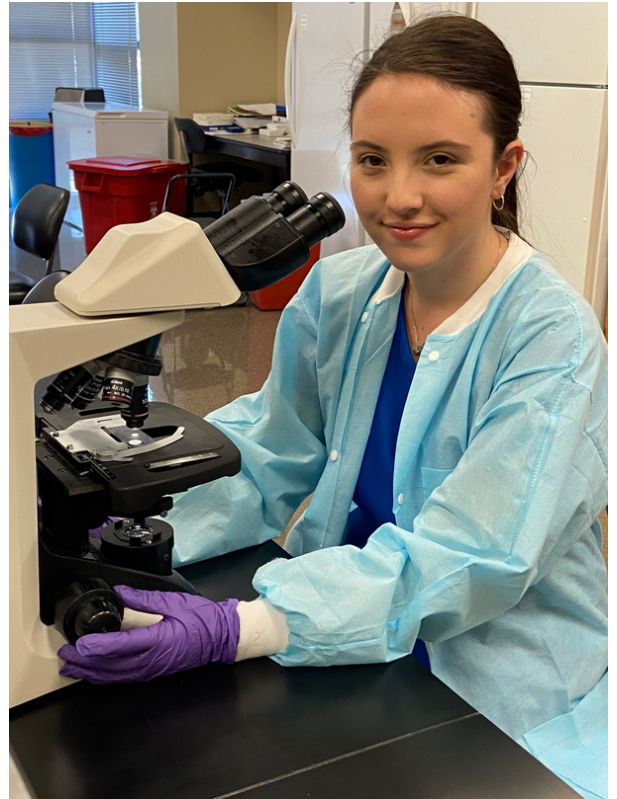
These individuals provide anatomic services under the direct supervision of a pathologist to perform gross examination and dissection of surgical pathology specimens and performance of postmortem examination.

- **Medical Laboratory Technician (MLT)**

These individuals collect and process biological specimens to perform routine in laboratory settings.

- **Phlebotomists**

These individuals tend to work face-to-face with individual clients within the lab, they draw blood, urine, and process these samples for analysis. (ASCP, 2024)



Work Environment and Growth



According to the U.S. Bureau of Labor and Statistics, there were approximately 344,200 clinical laboratory technologist and technician jobs available in the United States. The occupation is expected to continue to grow over the next decade by at least 5%, creating more than 18,000 additional job openings over the next decade (U.S. Bureau of Labor Statistics, 2024).

There are approximately 36% of all MLS and MLT occupations located within the general medical and surgical hospital setting, with medical and diagnostic laboratories consisting of 21% of the 344,200 available jobs in 2023. A vast decline in representation can be seen in smaller physician offices with 9%, educational services, such as state, local, and private institutions make up just 5% of the workforce, and other ambulatory services make up roughly 4% of the total MLS/MLT workforce (U.S. Bureau of Labor Statistics, 2024).

According to the American Society for Clinical Laboratory Science, the field of medical laboratory science has been experiencing a shortage in personnel for decades, with many attempts to increase the amount of MLS and MLT personnel across the country. With more than 4 million medical laboratory tests being performed each year in the United States and the ever-increasing older population, will lead to a greater need for the diagnosis of chronic diseases such as cancer, type 2 diabetes, and other geriatric-associated health conditions, will increase the need for additional MLS and MLT occupations (The American Society for Clinical Laboratory Science [ASCLS], 2024).

Average Annual Salary

According to the U.S. Bureau of Labor Statistics the average annual income for MLS and MLT occupations is \$65,020. These individuals typically work in the general medical and surgical hospital settings (U.S. Bureau of Labor Statistics, 2024).

The ASCP gives a more comprehensive occupational outlook for salaries within the medical laboratory sciences.

Occupation:

Medical Laboratory Scientist (MLS)- Mean Annual Salary \$86,900

Cytologist - Mean Annual Salary \$90,700

Histotechnologist - Mean Annual Salary \$89,100

Histotechnician - Mean Annual Salary \$83,900

Pathologists' Assistant - Mean Annual Salary \$105,500

Medical Laboratory Technician (MLT) - Mean Annual Salary \$68,700

Phlebotomist - Mean Annual Salary \$37,000

Medical Laboratory Assistant - Mean Annual Salary \$41,200

(ASCP, 2024)



A Look at Kentucky

In their recent annual workforce survey report, published in October of 2023, the Kentucky Hospital Association (KHA) gave a comprehensive look at the non-physician workforce in Kentucky. According to the survey there were approximately 2,168 available laboratory staff positions, with 249 vacancies reported by the Kentucky based hospitals that answered the survey. The survey noted that the Kentucky River Area Development District, or the rural southeastern portion of the state, has the highest percentage of vacancies at 24% with laboratory staff having an 11% vacancy rate across the state (Landrum & Schutze, 2023).

According to the U.S. Bureau of Labor Statistics there were approximately 5,030 MLS (technologists) and MLTs (technician) employed across the state of Kentucky. The annual mean salary is \$56,820 and is \$8,200 less than the national average (U.S. Bureau of Labor Statistics, 2024).

For individuals interested in the field of medical laboratory sciences or those individuals who have completed a degree in medical laboratory sciences, visit The American Society for Clinical Laboratory Sciences Kentucky (KSCLS), the KSCLS serves as a voice of clinical laboratory professionals in Kentucky. The organization promotes the value of the profession in both public and healthcare settings, they provide professional development opportunities, such as conferences and society meetings. They enhance the quality standards and care and have united to serve as one voice for the Commonwealth of Kentucky (The American Society for Clinical Laboratory Science Kentucky [KSCLS], 2021). For additional information about KSCLS visit: <https://www.kscls.org/home>.



More Information about UK's MLS Program

The Medical Laboratory Science (MLS) Program is offered at the University of Kentucky's Hazard campus, the UK Center of Excellence in Rural Health, and the Lexington campus. The 18-month program provides sequential instruction in laboratory medicine for students who have been well-prepared in science and mathematics during the first two years of study at the university (University of Kentucky College of Health Sciences, 2024).



Contact Information

Bianna Music, is the MLS UK CERH Associate Director
(606) 439-3557
biannasmith@uky.edu
750 Morton Blvd Hazard, KY 41701

According to data provided by the UK CERH MLS department, over 69 individuals have graduated from the MLS program since 2013, and 56 of those graduates were employed in rural eastern Kentucky.

The University of Kentucky College of Health Science's Gateway, published on March 13th, 2024, features Bianna Music, the Associate Director of the UK CERH MLS program. Professor Music describes the MLS profession as the hidden profession and passionately describes her journey into the MLS field. "I found my passion - because I can see the change and how I make a difference in Eastern Kentucky," Associate Director Music notes, "We're training professionals who are helping to meet our rural health need." Associate Director Music returned home, attended the UK CERH MLS program, and continues to train, educate, and prepare MLS's future to meet our rural communities' needs (UK College of Health Science, 2024).

Conclusion

MLS is a hidden gem within the healthcare workforce. While they are rarely seen and spend most of their time in the lab, MLS plays a critical role in managing, treating, and determining chronic diseases and many other life-threatening diseases. These individuals are the unsung heroes of the medical field, and with such a great need in rural areas such as Eastern Kentucky, the UK CERH MLS program is a beacon in the night, offering in-person classes in a rural setting. The University of Kentucky has offered the Medical Laboratory Science degree for 90 years (UK College of Health Science, 2024), and with dedication seen in individuals like Bianna Music, the University of Kentucky will continue to meet the needs of the men, women, and children of the Commonwealth of Kentucky.



References

American Society for Clinical Pathology. (2024). Careers in the Medical Laboratory. ASCP Stronger Together. Retrieved October 16, 2024, from <https://www.ascp.org/careers-fellowships/careers-in-the-laboratory?srsltid=AfmBOorPMkrGN5e2v5lyV-4EcgH7q6ZopOChlW-JKWQ2ASgJ8sffUARC>

Landrum, M., & Schutze, M. (2023). KHA Workforce Survey Report. KHA Data Center. <https://www.kyha.com/kha-data-center/workforce-data/>

The American Society for Clinical Laboratory Science Kentucky. (2021). One Voice, One Vision. <https://www.kscls.org/about>

The American Society for Clinical Laboratory Science. (2024). Clinical Laboratory Personnel Shortage. ASCLS The American Society for Clinical Laboratory Science. <https://ascls.org/workforce/>

U.S. Bureau of Labor Statistics. (2024). Clinical Laboratory Technologists and Technicians. Occupational Outlook Handbook. <https://www.bls.gov/ooh/healthcare/clinical-laboratory-technologists-and-technicians.htm#tab-1>

UK College of Health Science. (2024). Gateway (Issue 1). UK College of Health Sciences. https://issuu.com/ukhealthsciences/docs/ukchs.24.001_gateway_winter_mag_v4_pages

University of Kentucky College of Medicine. (2024). Medical Laboratory Science. Center of Excellence in Rural Health. <https://medicine.uky.edu/centers/ruralhealth/medical-laboratory-science>

Authors



Frances J. Feltner, DNP, MSN, RN, FAAN
frances.feltner@uky.edu

Caleb K. Williams, MHA, MSW, CSW
calebkwilliams@uky.edu

William Mace Baker, RN
mace.baker@uky.edu

.....
Contributor

Bianna Music, MLS (ASCP)cm
biannamusic@uky.edu
.....

University of Kentucky
Center of Excellence in Rural Health
750 Morton Blvd. B330
Hazard, KY 41701



Center of Excellence
in Rural Health