



American Society for
Clinical Pathology

A STUDENT GUIDE TO

Medical Laboratory Careers



Your Future Starts Here!



[whatsmynext.org](https://www.whatsmynext.org)

Why Medical Laboratory Careers?

When you think about a career in healthcare what comes to mind? A doctor? A nurse? Maybe an anesthesiologist? But behind almost every diagnosis, test result, and treatment plan is a medical laboratory professional.

There are many different jobs in the lab. A medical laboratory career could be a smart option for you if you can say “yes” to questions like:

- Do you want a professional job soon after high school?
- Are you interested in medicine but don't want to be a nurse or doctor?
- Do you like the idea of starting small and growing your career over time?
- Do you enjoy hands-on, problem-solving work?
- Are you looking for stability, strong pay, and room to grow?

Some medical laboratory career pursuits can be started while you're in high school. Others might take weeks or months to start. Others take two or four years. Many people learn while they learn, building their careers step by step instead of committing to one long education path upfront.



What Medical Laboratory Professionals Are Really Like

What makes someone successful in the laboratory? You might be surprised to learn that *grades alone don't determine success in the medical laboratory*. What matters just as much (and sometimes more):

Mindsets

- Curiosity: Asking “why” and “what could this be?”
- Growth mindset: Being okay with not getting it right the first time.
- Resilience: Pushing through tough classes or fastpaced environments.

Professional Skills

- Showing up on time.
- Communicating clearly when speaking and in writing.
- Paying attention to details.
- Following safety and quality rules.

Technical Comfort (you learn these over time)

- Using microscopes and laboratory tools.
- Handling specimens correctly and safely.
- Working carefully with data, samples, and equipment.

You don't need all of these skills today. You just need to be willing to build them!

This guide outlines the five tiers of medical laboratory careers, what each one is like, and how to figure out which may be the right fit for you.

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TIER 1

Entry-Level: Get Started Fast!

Tier 1 roles are the quickest way to start building a career in healthcare—often during or right after high school. You'll earn income, gain real experience, and learn how the healthcare system works from the inside. Many students use Tier 1 to “test-drive” lab careers before choosing what to pursue next.

SAMPLE CAREERS

Phlebotomist

Phlebotomists are specimen experts. You're the person who collects blood safely and correctly, then makes sure it's labeled, handled, and sent for the right tests. You also help patients feel calm in a moment that can be stressful.

[Learn more about this position!](#)

 **Mean annual salary:** \$40,962*

 **You've experienced this role when:** you've had blood drawn at a doctor's appointment, urgent care visit, hospital visit, or blood donation.

Medical Laboratory Assistant

Lab assistants help keep the lab running. You handle samples and paperwork, track specimens, support testing workflow, and protect quality from the moment a sample arrives to the moment results are released.

[Learn more about this position!](#)

 **Mean annual salary:** \$44,210*

 **You've experienced this role when:** your sample was labeled, processed, and sent for testing before your results showed up (in a portal, a call, or a follow-up visit).

Fast Facts

- **Fastest entry point** into medical lab careers.
- Great if you want to **start working soon** and build healthcare experience.
- These careers have **high impact**; your accuracy helps protect patients (sample quality matters).
- In real laboratories, success isn't just about grades—it's also about **professionalism and performance metrics** (accuracy, quality, reliability).

Education Needed

High school diploma or GED

On-the-job training or short certification (6–12 weeks)

Certificate programs earned through NAACLS accredited programs

Often 2 years or less in college

REALITY CHECK Is This Tier a Good Fit for You?

- ☒ You want a healthcare job you can start during or soon after high school.
- ☒ You're okay with (or willing to get comfortable with) blood/specimens/bodily fluids.
- ☒ You like structured work where details matter.
- ☒ You can stay calm and professional, even when someone else is nervous.
- ☒ You want to help people without needing years of school first.

SKILLS TO BUILD

Professional Skills

These are a big deal in real medical laboratories.

- Writing clear emails and correspondence and communicating respectfully.
- Showing up on time, being dependable, and staying organized.
- Handling feedback well (growth mindset).
- Working through small conflicts calmly (team environments).

Technical Comfort

You learn this through training.

- Following safety steps consistently.
- Labeling, handling, and transporting specimens correctly.
- Basic computer documentation.
- Staying calm and focused during repetitive tasks.

What's Next

Ask your teacher/counselor

Does our school have a Health Science CTE pathway I can explore? Even if it doesn't, ask whether your class or school can host an [ASCP Career Ambassador](#) to learn about medical laboratory careers.

Research local options

"Phlebotomy training near me"

"Lab assistant jobs near me"

Choose aligned classes (now or next year)

Biology, chemistry, math, anatomy/physiology.

Build one "career skill" this month

Write a professional email, scan/upload documents properly, or create a basic resume.

Try a related area

Join your school's forensics club, HOSA, science club, or case-study activities (these connect well to lab thinking).

TIER 2

Technical Roles: Build Core Lab Skills

These roles are where you start doing the real testing work: using instruments, following lab procedures, and building the skills that make diagnoses possible. It's a strong option if you want a stable healthcare career without committing to a 4-year degree right away.

SAMPLE CAREERS

Medical Laboratory Technician

You'll perform routine lab tests that support diagnosis, treatment, and prevention of disease (often across areas like chemistry, hematology, microbiology, and more).

[Learn more about this position!](#)



Mean annual salary: \$65,562*



You've experienced this role when: you or a family member got results from routine tests like bloodwork, urine testing, strep testing, or other common lab panels.

Histotechnician

You'll prepare tissue samples for microscopic review by a pathologist (the "behind-the-scenes" work that helps doctors understand disease).

[Learn more about this position!](#)



Mean annual salary: \$79,955*



You've experienced this role when: a biopsy or surgical sample (like a mole removal or tissue sample) was sent to the lab and a pathology report came back.

Fast Facts

- **Strong “earn sooner” path** with a real credential and real responsibility.
- You’ll learn how to use **core lab tools and processes** (microscopes, pipettes, labeling, processing, safety).
- Tier 2 can be a **launchpad** to Tier 3 later (many people “stack” their education).

Education Needed

Associate degree (2 years) or postsecondary certificate

Program training (for histology/histotech pathways)

National certification (e.g., ASCP)

SKILLS TO BUILD

Hands-on lab skills

Micropipetting, microscope basics, careful specimen handling

Lab math + accuracy

Conversions, measurement, checking your work

Safety habits

PPE, biohazards, clean technique

Professionalism

Clear communication, showing up prepared, writing solid emails, following instructions

(This matters more than you might realize.)

REALITY CHECK

Is This Tier a Good Fit for You?

- ☑ You want a hands-on science job without waiting 4+ years.
- ☑ You’re good with step-by-step processes and careful details.
- ☑ You can stay focused doing precision work (small mistakes matter).
- ☑ You’re okay around specimens (blood, body fluids, or tissue—depending on the role).
- ☑ You like the feeling of “I did it right” and “the results make sense”.

What's Next

Ask your school

“Do we have a health science/biotech pathway or dual enrollment?”

Pick aligned electives

Biology, chemistry, anatomy & physiology, statistics (if offered).

Try a “lab mindset” activity

Case studies, forensics club, science olympiad—anything puzzle-based.

Request exposure

Ask a teacher/counselor to host an [ASCP Career Ambassador visit](#) (best first move if you’re unsure).

TIER 3

Advanced Testing & Analysis

Tier 3 roles are the scientists who run more complex testing, troubleshoot instruments, and interpret patterns in data. This is where medical laboratory careers start to open doors into specialties (microbiology, molecular, blood bank, cytology, etc.) and into settings beyond hospitals (public health, biotech, research).

SAMPLE CAREERS

Histotechnologist

You'll perform routine and complex histology techniques (like special stains and advanced methods) to help diagnose disease from tissue samples. The Histotechnician is an integral part of the Anatomic Pathology team.

[Learn more about this position!](#)



Mean annual salary: \$84,240*



You've experienced this role when: biopsy results required more detailed lab work to help confirm what a tissue sample shows under the microscope.

Medical Laboratory Scientist

You'll perform many of the core diagnostic tests in clinical labs using advanced tools and problem solving to help guide patient care. Techniques include microscopy, immunodiagnosics, culture of microbes, mass spectrometry, PCR, DNA sequencing, and more.

[Learn more about this position!](#)



Mean annual salary: \$89,447*



You've experienced this role when: lab results helped guide a diagnosis—like infection testing, anemia screening, or monitoring conditions through repeat bloodwork.

Fast Facts

- Tier 3 is often the “**core engine**” of hospital and specialty labs.
- You’ll build **high-level problem solving**.
When something looks off, you investigate why.
- Lab science is **dynamic**; new tests and instruments evolve over time, so curiosity matters.

Education Needed

Bachelor’s degree in
medical laboratory science
or related field

National certification
(ASCP recommended)

SKILLS TO BUILD

Advanced lab technique

Precision pipetting,
microscopy, staining,
analyzers

Troubleshooting mindset

You don’t panic,
you investigate

Critical thinking

Asking “what could it
be?” before jumping
to an answer

Growth mindset

You won’t be perfect
on the first try (that’s
normal in real labs)

REALITY CHECK

Is This Tier a Good Fit for You?

- ✓ You like hard science and want to use it in a real job.
- ✓ You enjoy being the person who figures it out when results don’t match.
- ✓ You want a career with options (specialties, leadership later, biotech, public health).
- ✓ You’re okay being measured by real performance metrics, not just grades.
- ✓ You want a role that’s impactful even if you’re not in the spotlight.

What’s Next?

Build your foundation now

Bio + chem + math (and anatomy if offered).

If you’re college-bound

Look for MLS programs ask about clinical rotations, and explore laboratory internship opportunities in your area.

If you like “weird science” and memorable learning

Look for lab demos, microscopy days, or forensics units.

Ask your counselor

“What’s the closest pathway to lab science here—health science, biotech, or STEM?”

TIER 4

Specialist & Supervisory Roles

Tier 4 is for people who want to go deeper—into a specialty—and take on more responsibility (complex cases, training others, supervising workflows, or working closely with pathologists).

SAMPLE CAREERS

Pathologists' Assistant

You'll work under a pathologist to examine and evaluate surgical specimens and support post-mortem work (high-skill, high-trust role).

[Learn more about this position!](#)



Mean annual salary: \$125,379*



You've experienced this role when:

tissue removed during surgery or a biopsy was examined and prepared so a pathologist could make an official diagnosis.

Cytologist

You'll evaluate cells/body fluids and support advanced diagnostics through microscopic interpretation and related technologies.

[Learn more about this position!](#)



Mean annual salary: \$105,909*



You've experienced this role when:

a screening test like a Pap test (or other "cell sample" test) was examined to check for abnormal or suspicious cells.

Fast Facts

- You're no longer just doing the test, you're specializing.
- Tier 4 careers often involve more complex samples and deeper interpretation.
- Many roles mix science and communication (explaining findings, training others).

Education Needed

Bachelor's or master's degree
(depending on role)

Advanced certification
or credentials
(e.g., Specialist in Cytotechnology)

SKILLS TO BUILD

Strong visual skills

Pattern recognition
under a microscope

Comfort with complex specimens

Depending on role, you
may work with tissue
and body fluids

Professional communication

Reporting clearly and
collaborating with
medical teams

Leadership- ready habits

Reliability, calm under
pressure, mentoring
newer learners

REALITY CHECK

Is This Tier a Good Fit for You?

- ☑ You want to become a specialist (not just do general lab work).
- ☑ You like deep focus and can handle high attention-to-detail work.
- ☑ You're comfortable with "real medicine" realities (specimens, disease processes).
- ☑ You can handle responsibility and want to help guide quality and accuracy.
- ☑ You're open to more school because the role is more specialized.

What's Next?

Start exploring now

"Do I like cells, tissues, microbes, chemistry, or genetics most?"

If you're a forensics fan

Keep that interest—it often connects well to lab thinking.

Ask for exposure

Shadow days, hospital lab tours, or a [Career Ambassador classroom visit](#).

Plan your path

Tier 4 typically starts with Tier 3 or a strong bachelor's foundation.

TIER 5

Laboratory Leadership & Medical Roles

Tier 5 is where you lead labs, direct complex systems, develop tests, and (for physicians) interpret and consult on diagnostic medicine. These roles shape how laboratories run and how healthcare decisions get made at the highest level.

SAMPLE CAREERS

Anatomic Pathologist (MD)

You'll be a physician specializing in diagnosing disease through tissue and organ interpretation using microscopic and molecular methods.

[Learn more about this position!](#)



Mean annual salary: \$300,000*



You've experienced this role when: someone is waiting on "biopsy results" or a "pathology report" to confirm what's happening in the body.

Clinical Pathologist (MD)

You'll be a physician who directs laboratories and helps guide clinical decisions by reviewing and interpreting lab data.

[Learn more about this position!](#)



Mean annual salary: \$300,000*



You've experienced this role when: a hospital laboratory is making sure test results are accurate and safe decisions can be made, like choosing the right blood for a transfusion or confirming critical results.

Medical Laboratory Director with Doctoral Degree (including PhD)

You'll direct medical/public health labs and serve as a clinical consultant. You may focus on microbiology, chemistry, immunology, molecular diagnostics, and more.

[Learn more about this position!](#)



Mean annual salary: \$135–160,000*



You've experienced this role when: a lab introduces new testing (like for emerging infections) or improves quality systems to ensure results are reliable and consistent.

[*How do I start or accelerate my career in the laboratory?](#)

**Salaries are based on a national average and will vary by location, years of service and other factors.*

Fast Facts

- Tier 5 roles influence **patient care, safety, quality, and innovation.**
- You may guide **test development, lab policy, and system-wide decisions.**
- Leadership roles exist in **hospitals, public health labs, research, industry, and education.**

Education Needed

Advanced degree
(Master's, MD, PhD)

Advanced clinical/scientific training
+ years of experience

Multiple credentials depending on role

SKILLS TO BUILD

Strategic thinking

Seeing systems,
not just tasks

High-level communication

Explaining complex
results clearly

Ethics and responsibility

Decisions
carry weight

Leadership and mentoring

Developing teams
and building trust

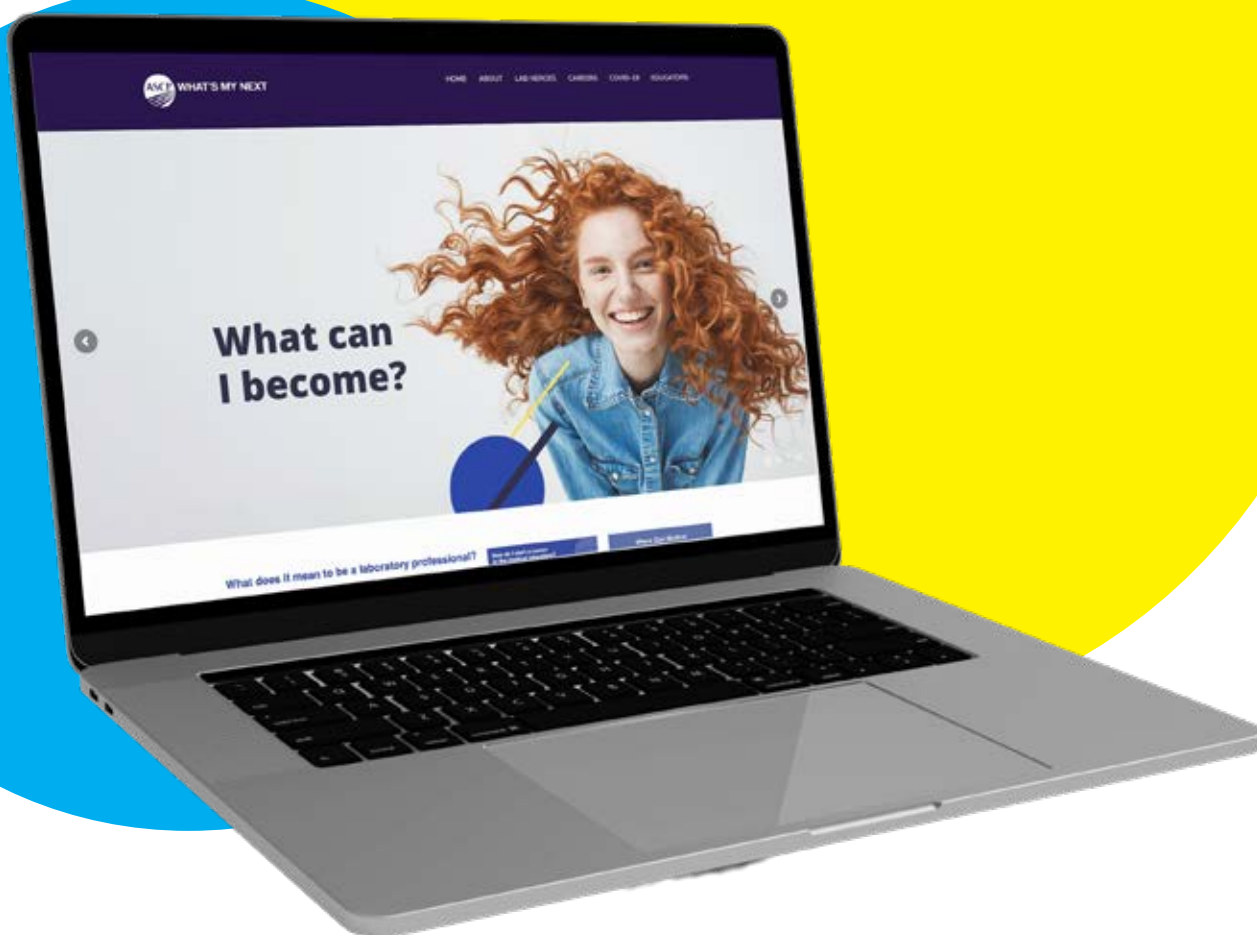
REALITY CHECK

Is This Tier a Good Fit for You?

- ☒ You want to be a top-level decision maker in science and healthcare.
- ☒ You're ready for a long education path (but want major impact).
- ☒ You like complex problem solving and leadership.
- ☒ You want to shape the future of testing, quality, and innovation.

What's Next?

- If this is your goal, focus on **strong science coursework, mentoring, and long-term** planning.
- Ask for **real exposure early** (you'll learn faster by seeing labs in action).
- Explore the differences between **the MD-path** (physician) and **the PhD-path** (doctoral lab director/research).
- **Start building your "why".** The strongest candidates can explain what draws them to lab medicine.



Ready to Explore Your Path?

No matter where you start, remember, you don't have to decide everything now. Medical laboratory careers are flexible, layered, and built over time.

Your future in the lab doesn't have to look like anyone else's—it just has to start with one step.

Visit **whatsmynext.org** to:

- Explore all 11 medical laboratory careers
- [Download the ASCP Career Roadmap](#)
- Watch career videos

whatsmynext.org

**Curious or unsure?
That's a great place
to start.**

Reach out to ASCP to ask questions, explore options, and learn how students get started in medical laboratory careers.

mphlwcoalition@ascp.org

**Start where you are.
Build skills. Stay curious.**



For more information on
laboratory professional
credentialing, check out the
ASCP Board of Certification.





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