

BUILDING THE BASE: HOW WE BUILT A HIGH SCHOOL MEDICAL LAB PROGRAM SUPPORTING HANDOUT

KNOWLEDGE AND SKILLS WE TEACH

THEORETICAL KNOWLEDGE

Core Knowledge:

- 1,000 Prefixes, Roots Suffixes of Med Terms
- Laboratory Safety
- Solution/Dilution Math
- Phlebotomy Theory
- Anatomy & Physiology

Collegiate Level Content:

- Hematology
- Immunology
- Microbiology
- Histology/Cytology
- Urinalysis
- Clinical Chemistry
- Genetics



Our Program

MEDICAL LAB PROGRAM

KEYS TO SUCCESS

- Early WBL
- Challenging engaging curriculum
- Laboratory visits & guest speakers
- Adding transferable skills for career exploration
- Enough equipment so sharing is minimized
- Ensure that the program meets state CTE standards
- Promote the Program!!
 - LinkedIn is your friend
 - Media Public Relations

LABORATORY SKILLS

Core Lab Skills:

- Microscopy
- Micropipetting
- Titration
- Spectrophotometry
- Venipuncture and Dermal Puncture
- Organic Chemistry Through Making Soap

Collegiate Level Lab Skills:

- Blood Smears
- ELISA
- Bacterial Identification
- Plates, Stains & Biochemical Tests
- Chemical & Microscopic Analysis of Urine
- POCT Clinical Chemistry Test
- Microtome Use
- H&E Staining
- Bioinformatics
- Molecular Cloning
- PCR
- Bacterial Transformation
- Now we are even adding Glovebox Incubator


AFFORDING EQUIPMENT

- Acquire funding through grants
 - Perkins Grant
 - Laboratory Grants
- Donations of lab equipment



REQUIREMENTS FOR A PROGRAM

NYS MEDICAL LABORATORY PROGRAM REQUIREMENTS

- Complete NYS Guide: 
- Suggested Certification Blueprint Organizations:
 - American Medical Technologies (AMT),
 - National Healthcareer Association (NHA),
 - National Center for Competency Testing (NCCT)
- Health Science Core Curriculum (<https://healthscienceconsortium.org/standard>)
- Supervised Clinical Experience (CO-OP)
- Affiliation agreement(s) must be established (a written contract with partnering healthcare facilities)
- Must have 108 hours of clinical experience

CERTIFICATION REQUIREMENTS

PHLEBOTOMY CERTIFICATION

- Check blueprint
- Determine number of successful venipunctures
- Determine required number of clinical hours
- Review certification exam

MED LAB ASSISTING CERTIFICATION

- Check blueprint
- Determine required number of clinical hours
- Review certification exam

MEDICAL LABORATORY COLLEGE OPPORTUNITIES


ARTICULATION AGREEMENTS

- Priority application status
- Waive application fees
- Waive classes or offer
- Dual Credit
- Offer scholarships



NYS TRANSITIONAL-A CTE TEACHER CERTIFICATION

Transitional A Certificate Requirements:

- Individuals must have a commitment from a New York State school, school district, or BOCES to employ and mentor them while they complete the Initial certificate requirements
- MLT or MLS Work Experience Required
- **More Information Can Be Found:** 

WORK-BASED LEARNING

STUDENT SHADOWING

- Provides students with a way to specialize in an area of interest
- Things to think about:
 - 1-8 Hours in length
 - Background checks on staff?
 - Organizational rules/regulations around high school students and lab
 - Scheduling
- Plan what the student will get out of it

UNPAID CO-OPS

- Great for training CO-OPs like are required for certification & NYS
- Things to think about:
 - 40-80 hours in length
 - Same as shadowing
 - Plan a set of competencies to meet certification requirements
 - Ensure staff are prepped to teach and constantly engage

PAID CO-OPS

- Students can provide the same role as an employee
- Labs don't need to follow NYS requirements for employment in relation to hazardous roles
- Things to think about:
 - <500 hours in length
 - Same as unpaid CO-OPs

**“WE ARE CREATING THE CLINICAL AND PUBLIC HEALTH WORKFORCE OF THE FUTURE!”
- CHIEF OF CDC’S EPIDEMIC INTELLIGENCE BRANCH DR. ERIC PEVZNER**