



EMPLOYABILITY PROFILE

Laboratory Science



Industry Based Skill Standards

Proficiency Definitions

NA = Not Applicable

1 = Developing

2 = Basic

3 = Proficient

4 = Mastery

	9th	10th	11th	12th
Demonstrates knowledge of health careers				
Demonstrates an awareness of a variety of health careers, understands roles, responsibilities and scope of practice for these careers. Has identified a career interest and has developed a career plan to move forward with education or training.				
Body as an interconnected system				
Demonstrates knowledge of the human body and its interconnected systems. Knows both parts and functions of organs and organ systems and is able to explain how they work together to maintain homeostasis.				
Diagnosis of medical conditions				
Identifies potential health issues by assessing symptoms or healthcare issues presented by patients, their families and/or caregivers. Utilizes content knowledge and available resources to identify body systems affected and possible diagnosis.				
Uses a teamwork approach to patient care				
Addresses patient complaints by gathering information and seeking peer and expert knowledge. Is aware of basic diagnostic tests, treatments and follow up for diabetes, heart disease, kidney disease, sickle cell anemia, cancer, and infectious diseases.				
Identifies and treats infectious disease				
Uses patient information and laboratory tests to isolate the cause of an infection. Able to suggest treatments for infection and appropriate follow up, and how to implement a protocol to prevent the spread of infection to others.				
Social, legal and ethical issues				
Is aware of state and federal patient privacy regulations. Demonstrates an awareness of ethical issues that might be encountered in the healthcare setting and effectively communicates possible solutions.				
Knowledge of health care system				
Demonstrates knowledge of how members of the patient care team and organizations work together to prevent and treat disease				
Can access current scientific research				
Demonstrates knowledge of research process and knows how to access scientific knowledge in the form of journal articles and guidance from professional organizations.				
Laboratory Science				
Describes organizational structure of the clinical laboratory and can identify areas of employment. Defines responsibilities, educational and credentialing requirements for laboratory personnel.				
Clinical Laboratory				
Identifies departments within the clinical laboratory and pathology and commonly performed tests in the various departments.				

	9th	10th	11th	12th
Use of medical terminology				
Recognizes and uses medical terms in a patient care setting with other health care professionals. Defines new words by utilizing knowledge of roots, prefixes and suffixes.				
Communication with patients, families and caregivers				
Communicates with health care professionals, patients, and caregivers both verbally and in writing to express ideas and obtain information. Uses appropriate vocabulary to share information, demonstrates active listening skills.				
Medical professions				
Describes responsibilities and training for multiple health professionals, including the allied health professions and subspecialties of medicine. Is able to recommend specialists based on needs of patients.				
Anatomy and physiology				
Is able to identify the structures of each body system, describe their microscopic and macroscopic anatomy, and identify their functions. Can locate structures using anatomical directions and regions.				
Laboratory skills				
Demonstrates the ability to properly use a variety of lab tools, including pipettes, centrifuge, gel electrophoresis and PCR.				
Scientific funding and grant proposals				
Describes the role of grants in scientific research. Can write, read and interpret a scientific grant proposal.				
Scientific investigations				
Can design a valid scientific experiment using the scientific method while avoiding researcher or participant bias. Is able to interpret other scientific investigations and assess their reliability.				
Legal/Ethical Responsibilities				
Defines informed consent. Explains patient confidentiality/HIPAA, protection of patient rights and privacy. Defines standard of care. Demonstrates characteristics of professional behavior.				
Works as a productive member of the healthcare team				
Actively participates as a member of a healthcare team while recognizing and appreciating others skills and abilities. Adds to the collective value of the team, and invigorates others to add to the collective efforts and goals.				
Infection control practices				
Demonstrates proper handwashing and glove removal. Identifies steps to avoid transmission of Bloodborne Pathogen. Demonstrates proper use of PPE. Disposes of sharps and biohazardous waste correctly. Prepares a 10% bleach solution. Explains the chain and routes of infection.				

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Specimen collection				
Identifies and understands components of vacuum tube system, types of tubes, and anticoagulants. Understands the importance of the “order of draw”. Describe correct and accurate patient identification and specimen labeling. Understands the difference and importance between serum, whole blood, plasma, urine and other body fluids.				
Customer service skills				
Demonstrates effective communication skills verbally, non-verbally and written. Demonstrates problem solving techniques with workplace conflicts. Demonstrates active listening skills, empathy, and compassion with patients.				
Data entry				
Completes a patient requisition. Accurately enters patient demographics, insurance, test and diagnosis information.				
Compound microscope				
Demonstrates correct use and focusing techniques. Demonstrates proper care and storage of microscope.				
Specimen processing				
Can safely operate a centrifuge. Understands time constraints of specimens. Demonstrates proper specimen processing, labeling, and aliquoting of samples.				
Urinalysis				
Performs gross, chemical, and microscopic examination of urine. Can perform and result a urine HCG test.				
Circulatory system				
Describes the structure and function of the circulatory system, including vessels, blood as a liquid tissue, and heart.				
Hematology				
Identifies proper specimens for testing. Understands the role of coagulation studies and the complete blood count in assessing patient health. Can make and stain a blood slide. Can identify 5 different types of white blood cells. Is familiar with red blood cell, white blood cell and platelet disorders.				
Immunohematology				
Performs ABP/Rh blood typing procedure.				
Microbiology				
Demonstrates proper streaking technique of culture media. Can prepare a gram stain. Can identify various bacteria shapes and gram reactions. Can perform and result rapid tests such as Group A streptococcus.				
Chemistry				
Can perform basic chemistry panels utilizing point of care instrumentation. Is familiar with the importance of reference values and has a knowledge of quality control in the laboratory				
Maintain/promote a safe laboratory environment				
Identifies key aspects of biological, chemical, and fire safety. Interprets SDS, GHS chemical labeling and NFPA hazard rating labels.				

College Credits Attained	credits
Anatomy & Physiology I with Lab	
Anatomy & Physiology I with Lab	
Physics I with Lab	
Physics II with Lab*	
Introductory Biology with Lab*	
Introductory Biology with Lab*	
Calculus I*	
SUNY Broome CLT110	
SUNY Broome CLT110	
SUNY OCC	
SUNY OCC	
SUNY OCC	

*Based on student interest

Industry Certifications Attained	✓
(AHA) Health Care Provider 1st Aid CPR	
OSHA Bloodborne Pathogen/Infection Control	
UPSTATE: Child Life 101	
Phlebotomy	