

PROGRAM CONCENTRATION: Healthcare Science
CAREER PATHWAY: Diagnostic Services
COURSE TITLE: Clinical Laboratory Technician Internship

Course Description: This internship focuses on the applications of clinical laboratory technology. Recommended course length is 150 hours with content focus as delineated in the internship performance standards. A minimum of 90 clinical application hours is required. The additional 60 internship hours may be utilized in the class, lab, or medical settings. Students will present Health Science Portfolios prior to completion of the course. After completion of internship and fulfilling all requirements of the National Healthcareer Association (NHA), students are encouraged to apply for Certified Phlebotomy Technician licensure (www.NHANOW.com).

Pre-requisites: Clinical Laboratory Technician

SAFETY AND SECURITY

HS-CLTI-1. Students will understand and apply principles of safety and security in a laboratory setting.

- a. Identify unsafe working conditions and how to maintain a safe work environment and prevent accidents.
- b. Demonstrate methods of fire prevention including location of extinguishers and alarms.
- c. Demonstrate appropriate action when observing a hazardous materials problem.
- d. Differentiate between infectious diseases and noninfectious diseases and demonstrate the use of standard precautions as described in the rules and regulations set forth by the Occupational Safety and Health Administration (OSHA).
- e. Identify and maintain security procedures as designated by each laboratory or medical facility.

Academic Standards:

ELA9RL5 The student understands and acquires new vocabulary and uses it correctly in reading and writing.

ELA10W1(a) Establishes a clear, distinctive perspective and maintains a consistent tone and focus throughout.

ELA10LSV1 The student participates in student-to-teacher, student-to-student, and group verbal interactions.

SCSh2 Students will use standard safety practices for all classroom laboratory and workplace investigations.

INTERPERSONAL

HS-CLTI-2. Students will apply principles of communication and customer service in all clinical laboratory settings.

- a. Demonstrate the ability to communicate effectively with clients and staff members while demonstrating respect for cultural, social, and ethnic diversity in all professional environments.
- b. Maintain patient confidentiality in all forms of communication in accordance with HIPAA (Health Insurance Portability and Accountability Act).

Academic Standard:

ELA10LSV1 The student participates in student-to-teacher, student-to-student, and group verbal interactions.

INFORMATION PROCESSING

HS-CLTI-3. Students will interpret and process pertinent medical and non-medical information.

- a. Demonstrate basic math skills including, but not limited to: interpreting and recording data on graphs, charts, and tables; demonstrating conversions between Roman and Arabic numerals; demonstrating conversions between U.S. Standard time (Greenwich Mean Time) and Military time (24 hour clock); and applying conversion constants between metric and conventional systems and within each system.
- b. Demonstrate methods used to determine pertinent criteria including problem and resource identification in a given situation.
- c. Demonstrate problem-solving techniques.
- d. Demonstrate prioritization and decision-making skills including identification of medical conditions or situations which would take priority over others.

Academic Standards:

ELA9RL5 The student understands and acquires new vocabulary and uses it correctly in reading and writing.

MM2P1 Students will solve problems (using appropriate technology).

MM2P4 Students will make connections among mathematical ideas and to other disciplines.

SCSh2 Students will identify and investigate problems scientifically.

OCCUPATION SPECIFIC

HS-CLTI - 4. Students will acquire and apply skills in a clinical laboratory setting for a minimum of 40 hours.

- a. Demonstrate an understanding of professional ethics and legal responsibilities.
- b. Understand and demonstrate standard operating policies and procedures in a clinical lab setting.
- c. Dress professionally for all clinical lab environments and maintain appropriate hygiene.
- d. Understand and apply infection control guidelines including techniques for maintaining isolation.
- e. Understand and utilize terminology related to clinical lab technology.
- f. Demonstrate understanding of advanced clinical skills in Phlebotomy, Hematology, Clinical Chemistry, Urinalysis, Microbiology, Serology/Immunology, and Immunohematology.
- g. Present Health Science Portfolio (Exit Requirement).

Academic Standards:

ELA9RL5 The student understands and acquires new vocabulary and uses it correctly in reading and writing.

SCSh3 Students will identify and investigate problems scientifically.

SCHSh4 Students use tools and instruments for observing, measuring and manipulating scientific equipment and materials.

SCSh5 Students will demonstrate the computation and estimation skills necessary for analyzing data and developing reasonable scientific explanations.

SAP1 Students will analyze anatomical structures in relationship to their physiological functions

SAP2 Students will analyze the interdependence of the integumentary, skeletal and muscular systems as these relate to the protection, support and movement of the human body.

SAP4 Students will analyze the physical, chemical and biological properties of process systems as they relate to transportation, absorption and excretion including the cardiovascular, respiratory, digestive, excretory systems

MM4P3 Students will communicate mathematically.

MM4P4 Students will make connections among mathematical ideas and to other disciplines.

MM4P5 Students will represent mathematics in multiple ways.

SSCG6 The student will demonstrate knowledge of civil liberties and civil rights.

Reading Across the Curriculum

Reading Standard Comment

After the elementary years, students engage in reading for learning. This process sweeps across all disciplinary domains, extending even to the area of personal learning. Students encounter a variety of informational as well as fictional texts, and they experience text in all genres and modes of discourse. In the study of various disciplines of learning (language arts, mathematics, science, social studies), students must learn through reading the communities of discourse of each of those disciplines. Each subject has its own specific vocabulary, and for students to excel in all subjects, they must learn the specific vocabulary of those subject areas in *context*.

Beginning with the middle grades years, students begin to self-select reading materials based on personal interests established through classroom learning. Students become curious about science, mathematics, history, and literature as they form contexts for those subjects related to their personal and classroom experiences. As students explore academic areas through reading, they develop favorite subjects and become confident in their verbal discourse about those subjects.

Reading across curriculum content develops both academic and personal interests in students. As students read, they develop both content and contextual vocabulary. They also build good habits for reading, researching, and learning. The Reading Across the Curriculum standard focuses on the academic and personal skills students acquire as they read in all areas of learning.

CTAE-RC-1 Students will enhance reading in all curriculum areas by:

Reading in All Curriculum Areas

- Read a minimum of 25 grade-level appropriate books per year from a variety of subject disciplines and participate in discussions related to curricular learning in all areas.
- Read both informational and fictional texts in a variety of genres and modes of discourse.
- Read technical texts related to various subject areas.

Discussing Books

- Discuss messages and themes from books in all subject areas.
- Respond to a variety of texts in multiple modes of discourse.
- Relate messages and themes from one subject area to messages and themes in another area.
- Evaluate the merit of texts in every subject discipline.
- Examine author's purpose in writing.
- Recognize the features of disciplinary texts.

Building Vocabulary Knowledge

- Demonstrate an understanding of contextual vocabulary in various subjects.
- Use content vocabulary in writing and speaking.
- Explore understanding of new words found in subject area texts.

Establishing Context

- Explore life experiences related to subject area content.
- Discuss in both writing and speaking how certain words are subject area related.
- Determine strategies for finding content and contextual meaning for unknown words.

CTAE Foundation Skills

The Foundation Skills for Career, Technical and Agricultural Education (CTAE) are critical competencies that students pursuing any career pathway should exhibit to be successful. As core standards for all career pathways in all program concentrations, these skills link career, technical and agricultural education to the state's academic performance standards.

The CTAE Foundation Skills are aligned to the foundation of the U. S. Department of Education's 16 Career Clusters. Endorsed by the National Career Technical Education Foundation (NCTEF) and the National Association of State Directors of Career Technical Education Consortium (NASDCTEc), the foundation skills were developed from an analysis of all pathways in the sixteen occupational areas. These standards were identified and validated by a national advisory group of employers, secondary and postsecondary educators, labor associations, and other stakeholders. The Knowledge and Skills provide learners a broad foundation for managing lifelong learning and career transitions in a rapidly changing economy.

CTAE-FS-1 Technical Skills: Learners achieve technical content skills necessary to pursue the full range of careers for all pathways in the program concentration.

CTAE-FS-2 Academic Foundations: Learners achieve state academic standards at or above grade level.

CTAE-FS-3 Communications: Learners use various communication skills in expressing and interpreting information.

CTAE-FS-4 Problem Solving and Critical Thinking: Learners define and solve problems, and use problem-solving and improvement methods and tools.

CTAE-FS-5 Information Technology Applications: Learners use multiple information technology devices to access, organize, process, transmit, and communicate information.

CTAE-FS-6 Systems: Learners understand a variety of organizational structures and functions.

CTAE-FS-7 Safety, Health and Environment: Learners employ safety, health and environmental management systems in corporations and comprehend their importance to organizational performance and regulatory compliance.

CTAE-FS-8 Leadership and Teamwork: Learners apply leadership and teamwork skills in collaborating with others to accomplish organizational goals and objectives.

CTAE-FS-9 Ethics and Legal Responsibilities: Learners commit to work ethics, behavior, and legal responsibilities in the workplace.

Implementation date
Fall 2009

CTAE-FS-10 Career Development: Learners plan and manage academic-career plans and employment relations.

CTAE-FS-11 Entrepreneurship: Learners demonstrate understanding of concepts, processes, and behaviors associated with successful entrepreneurial performance.