PROGRAM CONCENTRATION: **Healthcare Science**
CAREER PATHWAY: **Therapeutic Services**
COURSE TITLE: **Applications of Therapeutic Services**
PRE-REQUISITE: **Introduction to Healthcare Science**

Applications of Therapeutic Services is an intermediate course for the Therapeutic Services Career Pathway and is designed to provide an overall framework of basic skills utilized in the provision of direct client care. Monitoring and evaluating client status includes assessment techniques such as vital signs, as well as, the application of mathematical concepts appropriate to clinical expectations and/or work-based learning. The function and fundamental pathophysiology of each body system is evaluated prior to community first aid and basic life support techniques which are expanded to include rescue skills for infants and children. Students continue with the development of individual career portfolios utilizing postsecondary program research, employability skills, and /or work based learning and may receive recognition for their accomplishments through a variety of venues locally, regionally, and nationally such as the American Red Cross, American Heart Association, Health Occupations Students of America (HOSA), and the National Consortium on Health Science and Technology Education (NCHSTE). Upon completion of this course and pre-requisites students who successfully master these standards will be eligible to sit for a National Certificate of Proficiency or Mastery, issued in partnership between NCHSTE and National Occupational Competency Testing Institute (NOCTI).

Academic Foundations

HS-ATS-1: Student will demonstrate knowledge and understanding of the academic subject matter required for proficiency within their area. Academic Standards are integrated throughout the standard statements within their applicable discipline areas and documented immediately following the standard statement.

Career Planning and Development

HS-ATS-2: The student will engage in self-assessment, develop a detailed career plan, initiate portfolio development, and recognize the need for continuous self-assessment and goals modification in order to encourage personal and professional growth in the process of life-long learning.

a. Plan and evaluate a career choice within the therapeutic pathway; explain the educational/credentialing requirements; and identify various employment opportunities and career growth potential.
b. Differentiate between a job and a career; professional networking and professional development and a job application and a resume.
c. Explore entrepreneurial opportunities within the therapeutic pathway.
d. Develop career portfolio including detailed career plan.

Leadership and Intrateam Communication

HS-ATS-3: The student will demonstrate the roles and responsibilities of individual members as part of the healthcare team and/or Career and Technical Student Organization (CTSO), including their ability to promote the delivery of quality healthcare. They will interact effectively and sensitively with all members of the healthcare team and/or CTSO.

a. Respond appropriately to a variety of situations as a designated member of a team.
b. Communicate verbally and non-verbally with team colleagues to assure a best result for the client.
c. Demonstrate team responsibility by completing assigned tasks in a timely and effective manner.
d. Exhibit strong sense of team identity and commitment to purpose.
e. Relate classroom, lab, and community activities to aspects of a Career and Technical Student Organization's purpose, guiding principles, and leadership skills within the organization.
f. Compares and contrasts leadership/management styles and the appropriate style for a given situation.
g. Demonstrates an understanding of the nature of employer-employee relationships.
h. Exhibits leadership skills (i.e., negotiation skills, initiative, positive reinforcements, recognition of others' efforts, problem solving skills, conflict resolution).
i. Explains the importance of delegation.

Academic standards:
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.

ELA10LSV2(a) Assesses the way language and delivery affect the mood and tone of the oral communication and audience.

Safety Practices and Infection Control

HS-ATS-4: The student will demonstrate the proper implementation of safe work practices to prevent injury or illness as designated by each class, laboratory, clinical site, and/or facility's safety protocol.

a. Analyze existing and potential exposure risks to clients, co-workers, and self in healthcare setting.
b. Demonstrate adherence to standards, and guidelines for Center for Disease Control and Prevention (CDC), Occupational Safety and Health Administration (OSHA), Federal Drug Administration (FDA), Clinical Laboratory Improvement Amendments (CLIA), and Department of

Technical and Adult Education (DTAE), and other applicable regulatory agencies' guidelines

c. Contrast surgical technique and medically aseptic technique.

Client Interaction-Progressive Communication Techniques

HS-ATS-5: The student will demonstrate accurate and grammatically correct communications, both oral and written, utilizing medical terminology and other nomenclature appropriate to environment.

a. Evaluate the client's ability to understand and adapt communications to the client's level of comprehension applying an empathetic attitude, active listening skills, and additional specific techniques for persons with special needs to include the hearing and vision impaired.
b. Utilize multiple methods of presenting information including client teaching, orientation techniques, and effective oral presentations.

Information Technology Applications

HS-ATS-6: The student will analyze appropriate information technology tool(s) for information collection and their regulatory guidelines for collecting data and maintaining client health care records.

a. Analyze the Health Insurance Portability and Accountability Act (HIPAA).
b. Evaluate the Health Insurance Portability and Accountability Act's (HIPAA) impact on information technology applications.

Treatment Plans -Problem Solving and Critical Thinking

HS-ATS-7: The student will analyze the general purpose of a treatment plan.

a. Discuss the development of a treatment plan.
b. Evaluate the components of a treatment plan and their importance in identifying client health care needs, strengths and problems, and reporting results .

Applied Anatomy, Physiology, and Fundamental Pathophysiology of the Body's Systems

HS-ATS-8: The student will analyze the anatomy, physiology and basic pathophysiology of each of the body's systems and apply knowledge in performance of evaluating, monitoring, and treatment of client(s) and/or simulations.

a. Analyze anatomical structures in relationship to their physiological functions.
b. Analyze the interdependence of the integumentary, skeletal, and muscular systems as these relate to the protection, support and movement of the human body.

c. Assess the integration and coordination of body functions and their dependence on the endocrine and nervous systems to regulate physiological activities.
d. Analyze the interdependence of the body's systems as related to wellness, disease, and disorders.
e. Discuss the goals of therapy and care rehabilitation.
f. Discuss the etiology of two common diseases in each body system and how to treat and/or prevent them.

Academic standards:
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.

SAP3 Students will assess the integration and coordination of body functions and their dependence on the endocrine and nervous systems to regulate physiological activities.

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

Monitoring and Evaluating Client/Patient Status

HS-ATS-9: The student will demonstrate the process for basic assessment (i.e. vital signs, height, weight, etc…), monitoring, reporting/recording patient/client's health status.

a. Consistently perform all "beginning and ending" procedures utilized in a clinical setting (i.e. wash your hands, gather equipment, provide for privacy, etc…)
b. Evaluate factors that may affect temperature, pulse, respirations, blood pressure, height, and weight including normal and abnormal values.
c. Demonstrate the ability to utilize and accurately read manual and electronic equipment to measure vital signs, height and weight using aseptic technique as well as use other assessment instruments and equipment according to manufacturer's guidelines and accepted safety practices.
d. Accurately use manual and electronic equipment to measure vital signs, height and weight.
e. Report and record temperature, pulse, respirations, blood pressure, height and weight manually on graphic/flow sheets and/or electronically on mobile charts (when available) within designated time frame.
f. Apply mathematical concepts and perform mathematical calculations appropriate to clinical expectations and/or work-based learning site.

Academic standards:
MM2P4 Students will make connections among mathematical ideas and to other disciplines

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

Community First Aid

HS-ATS-10: The student will demonstrate the performance of first aid procedures meeting and/or exceeding all standards of the American Red Cross (ARC) and/or American Heart Association's (AHA) utilizing personal protection devices and equipment in compliance with all OSHA regulatory guidelines. Simulations may be used when necessary.

a. Demonstrate the assessment of a victim requiring first aid, identification of the signs and symptoms, and how to locate the victim's injuries.
b. Demonstrate the ability to adapt resources at the scene of injury for the provision of first aid techniques as necessary.
c. Perform basic triage techniques for emergency situations involving multiple victims.
d. Successfully complete the American Red Cross (ARC) and/or American Heart Association's (AHA) First Aid Training.

Basic Life Support Techniques Infants and Children

HS – ATS – 11: The student will demonstrate basic life support techniques for both infants and children while utilizing personal protective equipment devices and adhering to all standard precautions within OSHA guidelines. Simulations may be used for demonstration purposes as necessary.

a. Contrast infant and child risk factors for choking, respiratory, and cardiac distress.
b. Apply automatic external defibrillator and follow directions based on scenario for a child.
c. The student will successfully complete AHA or ARC Basic Life Support training for infants and children.

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.

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.