Implementation Date
Fall 2008

PROGRAM CONCENTRATION: **Healthcare Science**
CAREER PATHWAY: **Health Informatics**
COURSE TITLE: **Medical Terminology in Healthcare Systems**

PREREQUISITE: Introduction to Healthcare Science

This course provides students with further development of the fundamentals of medical terminology as it relates to health informatics. Included in this course is a basic study of the disease process with emphasis on diagnosis and treatment in which students are able to enrich the medical terminology study in an applied manner. The knowledge and skills gained this course will provide students entering many aspects of healthcare with a deeper understanding of the application of the language of health and medicine. The course concludes with students demonstrating their abilities to accurately locate and interpret information on clients' health record, as well as interpreting and transcribing medical orders/reports.

ACADEMIC FOUNDATIONS

HS-MTH-1. Students 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.

WORD ORIGINS (ROOTS, PREFIXES, AND SUFFIXES)

HS-MTH-2. Students will be able to identify medical terminology fundamentals, including but not limited to, word origins, roots, prefixes, and suffixes.

a. Discuss the historical development of the medical language including Latin and Greek origination of medical terms.
b. Explain the fundamentals of terminology as it relates to word roots, prefixes, and suffixes.
c. Pronounce basic medical terms.

WORD BUILDING, ABBREVIATIONS, AND SYMBOLS

HS-MTH-3. Students will build and interpret medical words using and combining morphemes.

a. Develop medical terms using roots.
b. Develop medical terms using suffixes.
c. Develop medical terms using prefixes.

d. Develop medical terms combining roots, prefixes, and suffixes.
e. Spell medical terms with 100% accuracy.
f. Understand and demonstrate knowledge of special guidelines for changing terms from singular to pleural form.

HS-MTH-4. Students will identify, articulate, interpret, and accurately list medical abbreviations and acronyms.

a. Interpret basic medical abbreviations.
b. Interpret basic medical symbols.

TERMINOLOGY RELATED TO THE HUMAN BODY

HS-MTH-5. Students will identify, articulate, interpret, and accurately spell medical terms related to the anatomy and physiology of body systems as they relate to diagnoses and procedures.

a. Utilize diagnostic, surgical, and procedural terms and abbreviations related to the integumentary system.
b. Utilize diagnostic, surgical, and procedural terms and abbreviations related to the respiratory system.
c. Utilize diagnostic, surgical, and procedural terms and abbreviations related to the cardiovascular system.
d. Utilize diagnostic, surgical, and procedural terms and abbreviations related to the musculoskeletal system.
e. Utilize diagnostic, surgical, and procedural terms and abbreviations related to the endocrine system.
f. Utilize diagnostic, surgical, and procedural terms and abbreviations related to the nervous system.
g. Utilize diagnostic, surgical, and procedural terms and abbreviations related to the lymphatic/immune and hemolytic systems.
h. Utilize diagnostic, surgical, and procedural terms and abbreviations related to the gastrointestinal system.
i. Utilize diagnostic, surgical, and procedural terms and abbreviations related to the urinary tract.
j. Utilize diagnostic, surgical, and procedural terms and abbreviations related to the reproductive system.

ACADEMIC STANDARDS:

SCSh9. Students will enhance reading in all curriculum areas.

SCSh6. Students will communicate scientific investigations and information clearly.

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

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

HS-MTH-6. Students will identify, articulate, interpret, and accurately spell occupational specific medical terminology and abbreviations for the students' field of study.

a. Utilize diagnostic, surgical, and procedural terms and abbreviations related to clinical medicine.
b. Utilize diagnostic, surgical, and procedural terms and abbreviations related to laboratory medicine.
c. Utilize diagnostic, surgical, and procedural terms and abbreviations related to pathology.
d. Utilize diagnostic, surgical, and procedural terms and abbreviations related to pharmacology.
e. Utilize diagnostic, surgical, and procedural terms and abbreviations related to diagnostic imaging.
f. Utilize diagnostic, surgical, and procedural terms and abbreviations related to surgery.

ACADEMIC STANDARDS:

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

ELA11W3. The student uses research and technology to support writing

FUNDAMENTALS OF MEDICAL SCIENCE

HS-MTH-7. Students will explain the fundamentals of the disease process.

a. Identify important contributions in medicine.
b. List and explain at least seven causes of disease.
c. List methods of treatment of disease.
d. Explain the five stages of dying and aspects of end of life care to include the living will, advanced directives, healthcare proxy, and hospice as it relates to cultural expectations.

HS-MTH-8. Students will list and describe common diseases of the body with emphasis on diagnosis and treatment.

a. Discuss the causes, grading, and diagnosis of neoplasms.

b. Explain three main forms of treatment of neoplasms, including advantages and disadvantages.
c. Identify and discuss common diseases of the blood, heart, and blood vessels including treatment, nutritional, and pharmacological implications of treatment.
d. Identify and discuss common diseases of the musculoskeletal system including nutritional and pharmacological aspects of treatment.
e. Identify and discuss common diseases of the integumentary system including nutritional and pharmacological aspects of treatment.
f. Identify and discuss common diseases of the gastrointestinal system including nutritional and pharmacological aspects of treatment.
g. Identify and discuss common diseases of the respiratory system including nutritional and pharmacological aspects of treatment.
h. Identify and discuss common diseases of the urinary system including nutritional and pharmacological aspects of treatment.
i. Identify and discuss common diseases of the endocrine system including nutritional and pharmacological aspects of treatment.
j. Identify and discuss common diseases of the nervous system including nutritional and pharmacological aspects of treatment.
k. Identify and discuss common diseases of the reproductive system including nutritional and pharmacological aspects of treatment.
l. Identify and discuss common diseases of the lymphatic/immune system including nutritional and pharmacological aspects of treatment.
m. Identify and discuss common diseases of the sensory system including nutritional and pharmacological aspects of treatment.

ACADEMIC STANDARDS:

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

SAP5e. Describe effects of aging on all body systems.

SAP4e. Examine various conditions that change normal body functions (e.g. tissue rejection, allergies, injury, diseases and disorders) and how the body responds.

HEALTH RECORDS

HS-MTH-9. Students will examine the types, content, and structure of the health record.

a. Explain the different purposes for maintaining a medical record.
b. Identify the various components of a health record and explain their purpose.

c. Explain the differences and similarities in record keeping in the various healthcare settings to include long-term care, acute care, rehabilitation settings, ambulatory care, and clinic/medical office settings.
d. Demonstrate understanding of HIPAA guidelines as it relates to health records.

Sample Task

- Watch HIPAA DVD and receive certification.

HS-MTH-10. Students will demonstrate the ability to accurately locate and interpret information on the client's health record.

a. Interpret medical orders.
b. Interpret medical reports.
c. Transcribe medical reports.

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.