NEBRASKA CAREER AND TECHNICAL EDUCATION

CTE®
Learning that works for Nebraska

NEBRASKA DEPARTMENT OF EDUCATION

HEALTH SCIENCES

PROGRAM OF STUDY STANDARDS

2023–2024

NEBRASKA CAREER AND TECHNICAL EDUCATION STATE MODEL PROGRAMS OF STUDY

CAREER FIELD OVERVIEW

The Health Sciences Career Field Area provides opportunities for students to deepen their understanding of topics in areas such as biotechnology research and development, behavioral health, diagnostic services, health informatics, supportive services, therapeutic services, and life span performance.

PROGRAMS OF STUDY

Programs of Study are the primary delivery model for Career and Technical Education (CTE) in Nebraska. They include a sequence of courses which progresses in specificity and rigor and are updated regularly to align with Nebraska's workforce needs and economic development priorities. This document includes the programs of study and course-based standards for the Health Sciences career field. These state model programs of study were developed to:

- Assist secondary schools in creating meaningful sequences of courses that adequately prepare individuals for seamless transitions to postsecondary education and careers eliminating duplication of coursework;
- Assist students in identifying appropriate courses for high school and postsecondary education that lead to their chosen career;
- Encourage collaboration between secondary and postsecondary education through curricular alignment;
- Offer opportunities for high-quality workplace experiences aligned to students' career interests;
- Promote the advancement of early postsecondary opportunities (including dual-credit courses) for all students; and
- Support postsecondary education options for students to further prepare them for successful transitions to their future careers.

Nebraska's programs of study are organized around Nebraska's CTE Model, which provides a way for students to explore the diversity of career options available to them.

NEBRASKA CAREER AND TECHNICAL EDUCATION MODEL

1 CORE ACADEMICS AND CAREER READINESS

At the center of the NCE Model is the expectation for all students to develop a solid academic core. The next ring identifies specific career readiness standards and practices that prepare students for success in postsecondary education as well as entrepreneurship/employment.

2 CAREER FIELDS

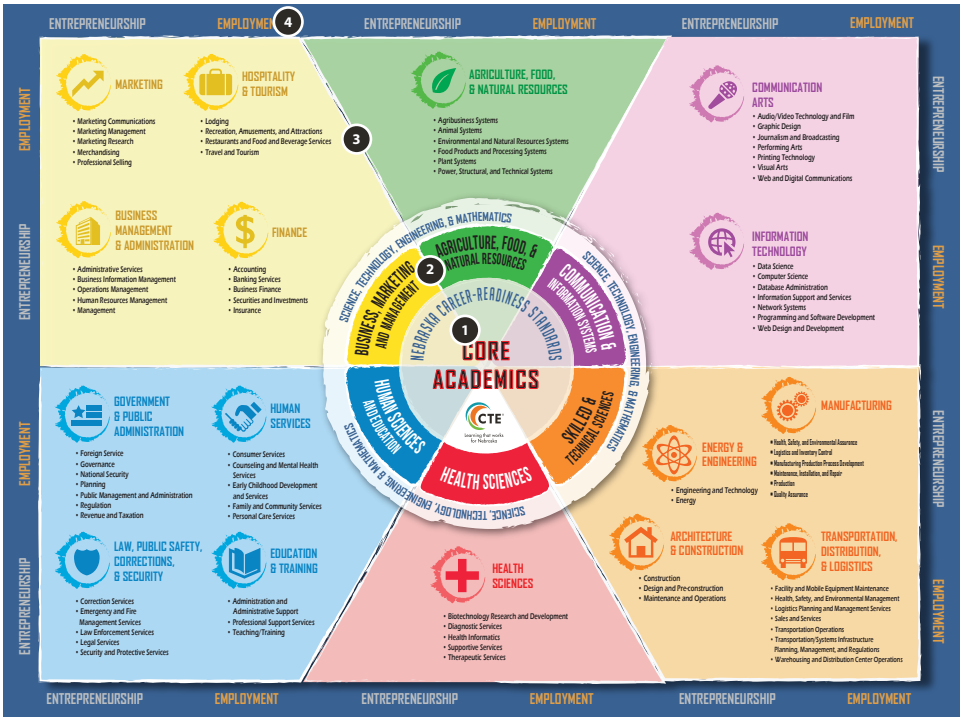
The six career fields represent broad sectors of the job market on which students may choose to focus.

3 CAREER CLUSTERS

Each career field is composed of career clusters radiating out from it. The clusters are more specific segments of the labor market. Each cluster is a grouping of careers that focus on similar subjects or similar skills. A basic understanding and exploration of each of the clusters will provide students with a solid foundation for career decision-making to conceptualize the entire world of work.

4 EMPLOYABILITY AND ENTREPRENEURSHIP

Career education provides the opportunity to gain the knowledge and skills for both employment and entrepreneurship. The reality for Nebraska and the United States is that entrepreneurship will help ensure economic growth and vitality. By infusing entrepreneurship competencies, career education is helping create the next generation of America's innovators and entrepreneurs.



The model is a visual map of "career fields" and "career clusters/pathways" and organizes the 16 National Career Clusters into six broad sectors of entrepreneurship and employment:

- Agriculture, Food and Natural Resources
- Business, Marketing and Management
- Communication and Information Systems
- Health Sciences
- Human Sciences and Education
- Skilled and Technical Sciences

These fields break down into more specific Career Clusters, Pathways and Occupational Specialties. The model provides a way for:

- Students to explore the diversity of career options available to them.
- Students to begin to prepare for their career with plans for secondary and post-secondary education.
- Schools to organize curriculum into Programs of Study that prepare students for opportunities in Nebraska's economy.

COURSE SEQUENCING

The courses within the State Model Program of Study are intended to be offered sequentially, to allow learners to build upon foundational knowledge and skills learned in introductory and intermediate courses and applied in more advanced capstone coursework. Non-duplicative sequences of courses ensure students transition to postsecondary education without duplication of classes and content. CTE enrollment data is collected at the course level. Students who participate and concentrate in CTE generally have more positive outcomes such as higher graduation rates along with postsecondary success.

Introductory Courses

Introductory courses set the foundation for a program of study by introducing students to broad foundational knowledge relative to an occupational area and career field.

Intermediate Courses

Intermediate courses build on the foundational knowledge of Introductory courses to further develop the academic, technical, and career readiness skills within a particular career field and occupational area.

Capstone Courses

Capstone courses are occupationally specific and further develop the necessary and required academic, technical, and career readiness skills needed for seamless transitions to postsecondary education and employment. Capstone courses often provide opportunities for students to earn postsecondary credit.

Levels of Participation

CTE Participant

A student who has earned one or more credits in any career and technical education program area.

CTE Concentrator

A secondary student who, in grades 9 through 12, has earned credit in at least two courses in a single career cluster program at the intermediate or capstone level.

State Model Programs of Study are coordinated, nonduplicative sequences of academic and technical content at the secondary and postsecondary levels that incorporate challenging State academic standards, address both academic and technical knowledge and skills, including Nebraska's Career Readiness Skills, are aligned with the needs of industries in Nebraska's economy, progress in specificity, have multiple entry and exit points that incorporate credentialing, and culminate in the attainment of a recognized postsecondary credential.

COURSE-BASED STANDARDS

Individual CTE courses, which make up the sequence of courses for Programs of Study, include content area standards and indicators to provide a framework for quality teaching and learning. While not required by state law, districts are encouraged to adopt these State Model Programs of Study and their related course-based standards. CTE State Model Programs of Study and course-based standards are revised on a five-year cycle to remain responsive to the rapid advances and needs of business and industry, help students explore a variety of postsecondary options and corresponding entrance requirements to help identify their next steps, and to align to changes in postsecondary programs.

Standards

At the highest level of generality, content area standards include a set of broad, overarching content-based statements that describe the basic cognitive, affective, or psychomotor expectations of students. They reflect long-term goals for learning.

Indicators

Under each standard are indicators, which further describe what a student must know and be able to do to meet the standard. Indicators are performance-based statements that provide educators with a clear understanding of the expected level of student learning and guidance. Indicators provide guidance for an assessment of student learning.

EXPANDED LEARNING OPPORTUNITIES

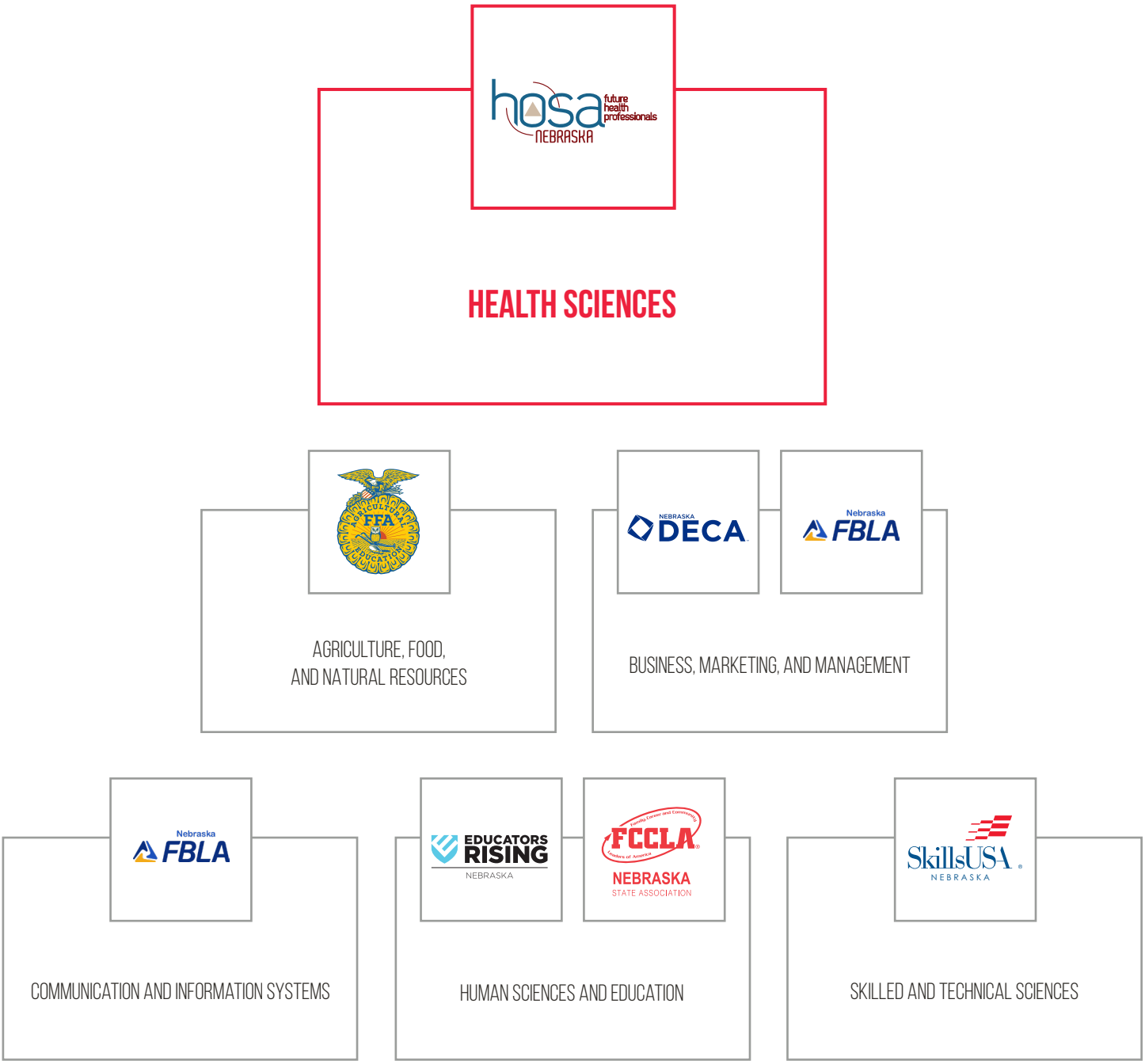
Expanded learning opportunities build on, support, and enhance learning within and outside of regular school programming. They are a critical component of Nebraska's educational landscape and should be intentionally supported to further develop students' college and career readiness. To signal aligned expanded learning opportunities, each Program of Study identifies additional areas where students may desire to personalize their program and take additional coursework or work-based learning that aligns with their interests. These expanded learning opportunities are not considered part of a Program of Study nor are they required, but rather a meaningful opportunity for students to continue to learn after completing the Program of Study sequence of courses within the context of their career interests. Along with aligned coursework, two prominent expanded learning opportunities include participating in Work-Based Learning or a Career and Technical Student Organization.

Work-Based Learning

Work-Based Learning (WBL) connects learners with employers to prepare them for success in an ever-changing workplace. WBL is a planned program of meaningful experiences related to the career interests of learners that enables them to acquire knowledge and skills in a real or simulated work setting. It requires strong partnerships between schools, colleges, and local employers. WBL is learning through work, not simply learning about work. Expanding high-quality WBL opportunities for students is one of Nebraska's CTE strategic priorities and is a program quality accountability indicator. Nebraska CTE affirms WBL as a critical component of career development. Throughout the State Model Programs of Study, courses where WBL is embedded into the class is noted in the course title (e.g., "Health Science Work-Based Learning Experience"). It is also signaled as an expanded learning opportunity across all programs of study.

Career And Technical Student Organizations

Career and Technical Student Organizations (CTSOs) are an extension of classroom instruction—applying classroom learning to real-world experiences. CTSOs provide opportunities for all students to develop career readiness skills through activities, competitions, and community service. Nebraska recognizes seven CTSOs aligned with the state's Programs of Study and career field areas. These include:



CAREER READINESS STANDARDS

Embedded into the State Model Programs of Study and courses are the Nebraska Career Readiness standards. These standards rest on important "practices and proficiencies" with long-standing importance in career education. These standards and related practices are not limited to formal CTE programs nor to the middle school or high school level. Rather, these standards and practices should be used over and over again with increasing complexity and relevance by students as they progress through their educational pathway. The standards themselves do not dictate curriculum, pedagogy or delivery of content. Schools and colleges may handle the teaching and assessing of these standards in many different ways.

THE CAREER READY INDIVIDUAL...

1. Applies appropriate academic and technical skills

2. Communicates effectively and appropriately

3. Contributes to employer and community success

4. Makes sense of problems and perseveres in solving them

5. Uses critical thinking

6. Demonstrates innovation and creativity

7. Models ethical leadership and effective management

8. Works productively in teams and demonstrates cultural competency

9. Utilizes technology

10. Manages personal career development

11. Attends to personal and financial well-being

HEALTH SCIENCES
PROGRAMS OF STUDY

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
BEHAVIORAL HEALTH (Pages 9–18)	077300 - Health Science I	077801- Behavioral Health I	077802 - Behavioral Health II	090128 - Careers in Mental Health (HSE), OR 320710 - Health Science Work-Based Learning Experience
BIOTECHNOLOGY RESEARCH (Pages 19–25)	077300 - Health Science I, OR 077803 AND 077804 - PLTW Principles of Biomedical Science I & II	077600 - Medical Terminology, OR 130210 - Anatomy & Physiology, OR 077805 AND 077806 - PLTW Human Body Systems I & II	012004 - Agriculture Biotechnology (AFNR), OR 077304 - Exploring Laboratory Medicine with Work-Based Learning	320710 - Health Science Work-Based Learning Experience
HEALTH INFORMATICS (Pages 26–33)	077300 - Health Science I	077301 - Health Science II, OR 077600 - Medical Terminology	077800 - Health Info Tech, OR 077812 - Health Info Management and Ethics	320710 - Health Science Work-Based Learning Experience
HEALTH SCIENCE (Pages 34–47)	077300 - Health Science I, OR 077803 AND 077804 - PLTW Principles of Biomedical Science I & II	077301 - Health Science II, OR 130210 - Anatomy & Physiology, OR 077805 AND 077806 - PLTW Human Body Systems I & II, OR 077600 - Medical Terminology	077302 - Health Science III, OR 077400 - Nursing Assistant/ CNA Certification, OR 077401 - Medication Aide Certification, OR 077402 - Emergency Medical Technician Certification, OR 077807 AND 077808 - PLTW Medical Interventions I & II, OR 077444 - Pharmacy Technician, OR 077446 - Phlebotomy Technician	077900 - Allied Health & Medicine, OR 077303 - Personal and Community Medical Issues/ Public Health, OR 320710 - Health Science/ HS&E Work-Based Learning Experience 077809 PLTW Biomedial Innovation I, AND 077810 PLTW Biomedical Innovation II
LIFE SPAN PERFORMANCE (Pages 48–60)	077300 - Health Science 1	130210 - Anatomy & Physiology, OR 077600 - Medical Terminology, OR 090124 - Nutrition (HSE)	077500 - Introduction to Sports Medicine, OR 077601 - Exercise Science, OR 077701 - Performance Nutrition, OR 090133 - Lifespan Nutrition & Wellness (HSE)	320710 - Health Science Work-Based Learning Experience, OR 320712 - HS&E Work-Based Learning Experience

HEALTH SCIENCE I

COURSE DESCRIPTION

Health Sciences 1 is designed to give an overview of the therapeutic services, diagnostic services, support services, biotechnology research and development, and health informatics pathways. The course focuses on exploring health science pathways and careers, employability skills, ethical and legal responsibilities, safety practices and technical skills, and the history and current healthcare trends.

STANDARDS AND INDICATORS:

HS.HS.6.1 Explain the history, trends, and career pathways within the healthcare system.

HS.HS.6.1.a	Identify the history of health care.
HS.HS.6.1.b	Identify current trends in healthcare and how they impact healthcare and society.
HS.HS.6.1.c	Describe the various healthcare career pathways.
HS.HS.6.1.d	Describe healthcare careers.
HS.HS.6.1.e	Compare healthcare delivery systems and related agencies.

HS.HS.6.2 Describe legal and ethical standards of healthcare.

HS.HS.6.2.a	Identify aspects of legal considerations related to healthcare.
HS.HS.6.2.b	Describe ethical practices with respect to cultural, social, and ethnical differences within the healthcare environment.

HEALTH SCIENCES I (cont.)

HS.HS.6.3 Analyze career readiness skills to enhance employment opportunities and job satisfaction within the healthcare industry.

HS.HS.6.3.a	Identify personal traits and attitudes desirable in a member of a healthcare team.
HS.HS.6.3.b	Identify common barriers to communication between healthcare professionals and patients.
HS.HS.6.3.c	Summarize professional standards as they apply to various healthcare settings.
HS.HS.6.3.d	Explain the role of medical terminology in effective communication in health care.
HS.HS.6.3.e	Demonstrate characteristics of an effective team.
HS.HS.6.3.f	Demonstrate various forms of professional communication.
HS.HS.6.3.g	Analyze personal aptitudes and interests related to health careers.

HS.HS.6.4 Apply technical skills of healthcare professions.

HS.HS.6.4.a	Identify existing and potential safety hazards to clients, co-workers, self, and environment within the healthcare setting.
HS.HS.6.4.b	Describe proper body mechanics.
HS.HS.6.4.c	Demonstrate methods to control the spread of infection.
HS.HS.6.4.d	Demonstrate procedures for measuring and recording vital signs.
HS.HS.6.4.e	Apply skills to obtain training or certification in cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.

BEHAVIORAL HEALTH I

COURSE DESCRIPTION

This course establishes a foundation that is necessary to understand Behavioral Health and investigate the career field of Behavioral Health. Course emphasis is placed on teaching students to successfully investigate Behavioral Health, education preparation, workforce structure and acquire awareness and knowledge of this career area.

It is recommended that students complete Behavioral Health I before taking Behavioral Health II.

STANDARDS AND INDICATORS:

HS.HS.1.1 Evaluate the impact of Behavioral Health in American society and on current health and wellness trends.

HS.HS.1.1.a	Identify current behavioral health issues and how they impact society
HS.HS.1.1.b	Interpret the historical overview and development of behavioral health in the United States.
HS.HS.1.1.c	Explain the role of behavioral health in society: your school, local, state, national, and international.
HS.HS.1.1.d	Explain the rationale behind the need for behavioral health.
HS.HS.1.1.g	Describe the code of ethics among professionals providing behavioral health services.
HS.HS.1.1.e	Differentiate between illness and mental illness.
HS.HS.1.1.f	Differentiate between behavioral health and mental health.
HS.HS.1.1.h	Evaluate the appropriateness and accuracy of information sources (e.g., literature, research, electronic information).

BEHAVIORAL HEALTH I (cont.)

HS.HS.1.2. Interpret behavioral health-related medical terms.

HS.HS.1.2.a Identify behavioral health prefixes, word roots, and suffixes.

HS.HS.1.2.b Construct behavioral health terms.

HS.HS.1.2.c Explain the reasoning behind standardized terminology in behavioral health.

HS.HS.1.3 Describe professional preparation, roles, and responsibilities of behavioral health providers.

HS.HS.1.3.a Describe the education requirements of behavioral health providers: psychologists, psychiatrists, psychiatric physician assistants, psychiatric nurses, licensed mental health practitioners, licensed drug and alcohol counselors, direct care professionals, school psychologists, and non-clinical social workers.

HS.HS.1.3.b Describe the professional roles and responsibilities of behavioral health providers: psychologists, psychiatrists, psychiatric physician assistants, psychiatric nurses, counselors and licensed mental health practitioners, licensed drug and alcohol counselors, marriage and family counselors, direct care professionals, school psychologists, and social workers.

HS.HS.1.4 Describe behavioral health interprofessional collaboration.

HS.HS.1.4.a Explain the role of the United States Department of Health as it relates to the state of Nebraska governing board for behavioral health professionals.

HS.HS.1.4.b Describe behavioral health professional organizations and the role they serve for the behavioral health professional: American Psychological Association, National Council for Counselors, WHO's Mental Health Atlas, etc.

HS.HS.1.5 Describe behavioral health and its integration into primary care providers.

HS.HS.1.5.a Explain the advantages/disadvantages of integrated behavioral health in a primary care environment.

HS.HS.1.5.b Summarize the levels of integrated behavioral health such as Boys Town, CHI Health, State Correctional Facility, Nebraska Medicine, etc.

BEHAVIORAL HEALTH II

COURSE DESCRIPTION

This course establishes a foundation that is necessary to understand Behavioral Health and investigate the career field of Behavioral Health. Course emphasis is placed on students successfully gaining skills in the field of Behavioral Health: explaining behavioral health assessments and treatments, addressing one's own mental health, investigating behavioral health career data in Nebraska, and advocating for the needs of others.

It is recommended that students complete Behavioral Health I before taking Behavioral Health II.

STANDARDS AND INDICATORS:

HS.HS.2.1 Explain behavioral health assessments and treatments.

HS.HS.2.1.a	Explain how the Diagnostic and Statistical Manual of Mental Disorders (DSM) handbook is used in diagnosis and treatment in behavioral health.
HS.HS.2.1.b	Compare behavioral health assessment and treatment plans (e.g., ADHD, depression, anxiety).
HS.HS.2.1.c	Describe progression of services from group to individualized therapy.
HS.HS.2.1.d	Describe theories and interventions being used in mental and social health (cognitive behavioral therapy (CBT), dialectical behavior therapy (DBT), creative arts therapy (CAT), emotionally focused therapy (EFT), and solution-focused brief therapy (SFBT).
HS.HS.2.1.e	Describe informed consent and how it impacts behavioral health.
HS.HS.2.1.f	Describe an individual treatment plan and its use.

BEHAVIORAL HEALTH II (cont.)

HS.HS.2.2 Create a plan and related actions and activities to improve one's own mental health and general well-being.

HS.HS.2.2.a Summarize how personal values and experiences influence one's usage of behavioral health services.

HS.HS.2.2.b Describe strategies to develop and evaluate personal mindfulness awareness plans.

HS.HS.2.2.c Explain how social and behavioral interventions are used to improve behavioral and social health in schools and communities.

HS.HS.2.3 Describe behavioral health career outlook projections and preparation in Nebraska

HS.HS.2.3.a Describe a behavioral health career path.

HS.HS.2.3.b Explain a personal career interest area, employment outlook, salary scale, and Nebraska licensing requirements.

HS.HS.2.3.c Describe the challenges and opportunities for behavioral health careers in Nebraska.

HS.HS.2.3.d Interpret data on behavioral health services deficit areas in Nebraska.

HS.HS.2.3.e Describe the educational path to a career in behavioral health.

HS.HS.2.3.f Explain educational costs (e.g., scholarships, grants, federal loans, personal bank loans, and cost of interest and loan repayment).

BEHAVIORAL HEALTH II (cont.)

HS.HS.2.4 Demonstrate advocacy that supports the needs and rights of others.

HS.HS.2.4.a	Identify conferences, workshops, and retreats that educate and support behavioral health issues.
HS.HS.2.4.b	Explain advocacy and its application to behavioral health.
HS.HS.2.4.c	Describe efforts to reduce stigma of mental health through public education (e.g., Substance Abuse and Mental Health Services Administration).
HS.HS.2.4.d	Describe barriers to behavioral health provider access.
HS.HS.2.4.e	Demonstrate ways to advocate for friends and family members who need support for behavioral health issues.
HS.HS.2.4.f	Demonstrate ways to advocate for a positive, respectful school environment that supports pro-social behavior (e.g., handling teasing and bullying and reducing stigma associated with mental and behavioral health).

CAREERS IN MENTAL HEALTH

(from the Human Sciences and Education Standards)

COURSE DESCRIPTION

This introductory course explores a variety of careers in the counseling and mental health field building on concepts from Introduction to Family & Consumer Sciences. Topics covered include personal qualities, skills, and educational requirements needed to enter this career field. The importance of ethical behavior required by mental health professionals will also be addressed.

STANDARDS AND INDICATORS:

HSE.HS.4.1 Analyze non-therapeutic helper careers where counseling practices are applied.

HSE.HS.4.1.a	Describe the role and importance of helpers in society.
HSE.HS.4.1.b	Identify the six types of helpers (professional helpers, paraprofessional helpers, helping as a part of their work, volunteer helpers, peer helpers, and informal helpers).
HSE.HS.4.1.c	Explain how helping requires balancing both intellectual and emotional competence.

HSE.HS.4.2 Summarize professional character qualities required of a mental health professional.

HSE.HS.4.2.a	Explain the importance of being a lifelong learner within the mental health career field.
HSE.HS.4.2.b	Identify the importance of cultural literacy and equity as it applies to mental health services.
HSE.HS.4.2.c	Explain personal characteristics necessary to excel at providing mental health services.

CAREERS IN MENTAL HEALTH (cont.)

HS.HS.4.3 Analyze American views of mental health throughout history up until present times, and the impact these views have had on individual or family health and wellness.

HSE.HS.4.3.a Describe the historical development of the mental health field.

HSE.HS.4.3.b Explain the role of mental health in society (e.g., school, local, state, national).

HSE.HS.4.3.c Compare and contrast mental health and behavioral health.

HSE.HS.4.3.d Explain how the discovery of Adverse Childhood Experiences (ACEs) has impacted views regarding the importance of mental health topics.

HSE.HS.4.3.e Compare and contrast mental health and mental illness.

HSE.HS.4.3.f Analyze current mental health issues and trends and how they impact society.

HSE.HS.4.4 Distinguish between careers in the mental health field.

HSE.HS.4.4.a Identify employment trends within the mental health career field.

HSE.HS.4.4.b Describe the role mental health professionals have in society.

HSE.HS.4.4.c Compare and contrast the roles of a variety of mental health professionals (e.g., LMHPs, non-clinical social workers, educational counselors, school psychologists, research psychologists, clinical psychologists, psychiatrists).

HSE.HS.4.4.d Compare and contrast training and education requirements for various careers in the mental health field.

HSE.HS.4.5 Identify the process for becoming a certified mental health professional.

HSE.HS.4.5.a Explain the process and requirements for education and licensure of mental health professionals in Nebraska.

HSE.HS.4.5.b Identify procedures and fees associated with professional licensing of mental health professionals in the State of Nebraska.

HSE.HS.4.5.c Identify colleges and other post-secondary options for students interested in pursuing a career in the mental health field.

CAREERS IN MENTAL HEALTH (cont.)

HSE.HS.4.6 Appraise the importance of ethical behavior within the mental health professions.

HSE.HS.4.6.a	Identify the ethical obligations of those working in the mental health career field.
HSE.HS.4.6.b	Outline client rights and responsibilities in the therapeutic process.
HSE.HS.4.6.c	Describe the consequences of violating codes of ethics for mental health professionals.
HSE.HS.4.6.d	Analyze the penalties for violations by mental health professionals as it pertains to confidentiality and HIPAA.
HSE.HS.4.6.e	Examine the importance of ethical behavior when conducting psychological research on human subjects, including the Belmont Report and the role of Institutional Review Boards.
HSE.HS.4.6.f	Analyze the basic principles of ethical behavior (e.g., beneficence, nonmaleficence, justice, autonomy, and fidelity).

HSE.HS.4.7 Analyze the importance of mental health professionals taking care of their own mental health.

HSE.HS.4.7.a	Explain the essential need for mental health professionals to prioritize their own mental health.
HSE.HS.4.7.b	Describe optimal mental health and well-being.
HSE.HS.4.7.c	Implement strategies to practice self-care and develop personal mindfulness awareness plans.
HSE.HS.4.7.d	Summarize how personal values and experiences influence one's usage of mental and behavioral health services.
HS.HS.4.7.e	Identify basic intervention techniques to improve one's mental health.

HEALTH SCIENCE I

COURSE DESCRIPTION

Health Sciences 1 is designed to give an overview of the therapeutic services, diagnostic services, support services, biotechnology research and development, and health informatics pathways. The course focuses on exploring health science pathways and careers, employability skills, ethical and legal responsibilities, safety practices and technical skills, and the history and current healthcare trends.

STANDARDS AND INDICATORS:

HS.HS.6.1 Explain the history, trends, and career pathways within the healthcare system.

HS.HS.6.1.a Identify the history of health care.

HS.HS.6.1.b Identify current trends in healthcare and how they impact healthcare and society.

HS.HS.6.1.c Describe the various healthcare career pathways.

HS.HS.6.1.d Describe healthcare careers.

HS.HS.6.1.e Compare healthcare delivery systems and related agencies.

HS.HS.6.2 Describe legal and ethical standards of healthcare.

HS.HS.6.2.a Identify aspects of legal considerations related to healthcare.

HS.HS.6.2.b Describe ethical practices with respect to cultural, social, and ethnical differences within the healthcare environment.

HEALTH SCIENCES I (cont.)

HS.HS.6.3 Analyze career readiness skills to enhance employment opportunities and job satisfaction within the healthcare industry.

HS.HS.6.3.a Identify personal traits and attitudes desirable in a member of a healthcare team.

HS.HS.6.3.b Identify common barriers to communication between healthcare professionals and patients.

HS.HS.6.3.c Summarize professional standards as they apply to various healthcare settings.

HS.HS.6.3.d Explain the role of medical terminology in effective communication in health care.

HS.HS.6.3.e Demonstrate characteristics of an effective team.

HS.HS.6.3.f Demonstrate various forms of professional communication.

HS.HS.6.3.g Analyze personal aptitudes and interests related to health careers.

HS.HS.6.4 Apply technical skills of healthcare professions.

HS.HS.6.4.a Identify existing and potential safety hazards to clients, co-workers, self, and environment within the healthcare setting.

HS.HS.6.4.b Describe proper body mechanics.

HS.HS.6.4.c Demonstrate methods to control the spread of infection.

HS.HS.6.4.d Demonstrate procedures for measuring and recording vital signs.

HS.HS.6.4.e Apply skills to obtain training or certification in cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.

MEDICAL TERMINOLOGY

COURSE DESCRIPTION

This course is designed to help students learn medical language by analyzing its components. The primary focus is on developing both oral and written skills in the language used to communicate within health care professions. This course is a fundamental course for students who are pursuing a career in the healthcare profession. It is the basic language required for all areas of health science and is required for any health care profession beginning with entry level staff.

STANDARDS AND INDICATORS:

HS.HS.11.1 Apply medical terminology.

HS.HS.11.1.a Explain the construction of medical terms including singular and plural form as well as prefixes, suffixes, roots, and combinations.

HS.HS.11.1.b Extract medical information from realistic medical references/documents, hospital medical records, and case studies.

HS.HS.11.1.c Apply medical terminology to real-life scenarios.

HS.HS.11.1.d Apply medical terms relating to medical specialties or personnel, pathology, surgical, and diagnostic procedures.

HS.HS.11.2 Apply medical abbreviations.

HS.HS.11.2.a Identify acceptable and error-prone abbreviations and symbols.

HS.HS.11.2.b Determine time using the 24-hour clock.

HS.HS.11.2.c Apply identified medical abbreviations, symbols, numbers, and quantity measures.

HS.HS.11.3 Apply anatomical terms.

HS.HS.11.3.a Identify terms associated with the planes, cavities, and regions of the body.

HS.HS.11.3.b Describe standard anatomical position as a reference point for identifying areas of the body and organs.

HS.HS.11.3.c Apply directional terms.

MEDICAL TERMINOLOGY (cont.)

HS.HS.11.4 Interpret medical terms related to the anatomy and physiology of body systems.

HS.HS.11.4.a Describe the basic structural and functional organization of the human body and the systems of the body, including the integumentary, cardiovascular, musculoskeletal, immune, respiratory, digestive, urinary, reproductive, nervous, and endocrine systems.

HS.HS.11.4.b Describe the inter-relationship between body systems.

HS.HS.11.4.c Describe common diseases and disorders of each body system.

AGRICULTURE BIOTECHNOLOGY

(from the Agriculture, Food, and Natural Resources Standards)

COURSE DESCRIPTION

A course focusing on students examining the relationship between biotechnology and modern agriculture, food, and natural resource systems. Students identify purposes and methods of genetic modification of plants and animals and the impact of biotechnology on a global scale. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

STANDARDS AND INDICATORS:

AFNR.HS.2.1 Assess factors that have influenced the evolution of biotechnology in agriculture.

AFNR.HS.2.1.a	Research and summarize the evolution of biotechnology in agriculture.
AFNR.HS.2.1.b	Summarize current work in biotechnology and the added value to agriculture and society.
AFNR.HS.2.1.c	Compare and contrast the benefits and risks of biotechnology and conventional approaches to improving agriculture.

AFNR.HS.2.2 Evaluate the scope and implications of bioethics, law, and public perceptions of biotechnology in agriculture.

AFNR.HS.2.2.a	Compare and contrast global regulatory systems for biotechnology in agriculture.
AFNR.HS.2.2.b	Research and summarize the emergence, evolution, and implications of bioethics associated with biotechnology in agriculture.
AFNR.HS.2.2.c	Describe the significance and impacts of legal issues related to biotechnology in agriculture.
AFNR.HS.2.2.d	Investigate the impact of public perceptions on the application of biotechnology in different (AFNR) systems.

AGRICULTURE BIOTECHNOLOGY (cont.)

AFNR.HS.2.3 Apply appropriate laboratory skills to complete tasks in a biotechnology research and development environment (e.g., standard operating procedures, record keeping, aseptic technique, equipment maintenance).

AFNR.HS.2.3.a Maintain and interpret records documented in a laboratory to ensure data accuracy and integrity (e.g., avoid bias, record any conflicts of interest, avoid misinterpreted results).

AFNR.HS.2.3.b Categorize and identify laboratory equipment according to its purpose in scientific research.

AFNR.HS.2.3.c Apply standard operating procedures for the safe handling, management, and disposal of biological and chemical materials in a laboratory according to a standard operating procedures plan.

AFNR.HS.2.3.d Demonstrate or identify the steps necessary to perform simple genetic modification.

AFNR.HS.2.4 Apply concepts of biotechnology to solve problems in Agriculture, Food, and Natural Resources (AFNR) systems (e.g., bioengineering, food processing, waste management, horticulture, forestry, livestock, crops).

AFNR.HS.2.4.a Identify biotechnology principles, techniques, and processes to create transgenic species through genetic engineering.

AFNR.HS.2.4.b Explain biotechnology principles, techniques, and processes to enhance the production of food through the use of microorganisms and enzymes.

AFNR.HS.2.4.c Apply biotechnology principles, techniques, and processes to protect the environment and maximize use of natural resources (e.g., biomass, bioprospecting, industrial biotechnology).

AFNR.HS.2.4.d Apply biotechnology principles, techniques, and processes to enhance plant and animal care and production (e.g., selective breeding, pharmaceuticals, biodiversity).

AFNR.HS.2.4.e Apply biotechnology principles, techniques and processes to produce biofuels (e.g., fermentation, transesterification, methanogenesis).

AFNR.HS.2.4.f Apply biotechnology principles, techniques, and processes to improve waste management (e.g., genetically modified organisms, bioremediation).

EXPLORING LABORATORY MEDICINE WITH WORK-BASED LEARNING

COURSE DESCRIPTION

This course is a Work-Based Learning (WBL) experience, providing students with the art and science of the clinical lab setting and the global range of career opportunities available. Students will job shadow in the community to gain real life career experience. Examination of legal and ethical issues will be covered throughout the class. Participants will have hands-on practice with lab techniques, equipment, and record keeping relevant to medical, veterinary, dental, biotechnology, agricultural and food science, and multiple other professions.

STANDARDS AND INDICATORS:

HS.HS.4.1 Interpret the legal and ethical responsibilities of the clinical laboratory setting.

HS.HS.4.1.a Explain the legal responsibilities, limitations, and implications of clinical lab professionals.

HS.HS.4.1.b Interpret the ethical situations in the clinical laboratory setting.

HS.HS.4.2 Differentiate between clinical lab professions.

HS.HS.4.2.a. Describe the personal traits and characteristics desirable in a member of a clinical lab.

HS.HS.4.2.b. Compare clinical lab careers.

HS.HS.4.2.c. Demonstrate professional clinical laboratory competencies in an authentic clinical laboratory setting.

HS.HS.4.3 Apply industry-based practices for laboratory procedures to gather and analyze data.

HS.HS.4.3.a Connect personal and laboratory safety practices.

HS.HS.4.3.b Demonstrate professional procedures for recording and reporting of data.

HS.HS.4.3.c Demonstrate the proper use of handling, preparing, and using mixtures, solutions, specimens, and laboratory supplies and equipment according to protocol.

HS.HS.4.3.d Analyze results of data collected during the clinical lab experience.

HEALTH SCIENCE I

COURSE DESCRIPTION

Health Sciences 1 is designed to give an overview of the therapeutic services, diagnostic services, support services, biotechnology research and development, and health informatics pathways. The course focuses on exploring health science pathways and careers, employability skills, ethical and legal responsibilities, safety practices and technical skills, and the history and current healthcare trends.

STANDARDS AND INDICATORS:

HS.HS.6.1 Explain the history, trends, and career pathways within the healthcare system.

HS.HS.6.1.a Identify the history of health care.

HS.HS.6.1.b Identify current trends in healthcare and how they impact healthcare and society.

HS.HS.6.1.c Describe the various healthcare career pathways.

HS.HS.6.1.d Describe healthcare careers.

HS.HS.6.1.e Compare healthcare delivery systems and related agencies.

HS.HS.6.2 Describe legal and ethical standards of healthcare.

HS.HS.6.2.a Identify aspects of legal considerations related to healthcare.

HS.HS.6.2.b Describe ethical practices with respect to cultural, social, and ethnical differences within the healthcare environment.

HEALTH SCIENCES I (cont.)

HS.HS.6.3 Analyze career readiness skills to enhance employment opportunities and job satisfaction within the healthcare industry.

HS.HS.6.3.a Identify personal traits and attitudes desirable in a member of a healthcare team.

HS.HS.6.3.b Identify common barriers to communication between healthcare professionals and patients.

HS.HS.6.3.c Summarize professional standards as they apply to various healthcare settings.

HS.HS.6.3.d Explain the role of medical terminology in effective communication in health care.

HS.HS.6.3.e Demonstrate characteristics of an effective team.

HS.HS.6.3.f Demonstrate various forms of professional communication.

HS.HS.6.3.g Analyze personal aptitudes and interests related to health careers.

HS.HS.6.4 Apply technical skills of healthcare professions.

HS.HS.6.4.a Identify existing and potential safety hazards to clients, co-workers, self, and environment within the healthcare setting.

HS.HS.6.4.b Describe proper body mechanics.

HS.HS.6.4.c Demonstrate methods to control the spread of infection.

HS.HS.6.4.d Demonstrate procedures for measuring and recording vital signs.

HS.HS.6.4.e Apply skills to obtain training or certification in cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.

HEALTH SCIENCE II

COURSE DESCRIPTION

Health Sciences II is designed to provide students a more in-depth exploration of personal interests within healthcare as well as a deeper analysis of the healthcare system overall. The course will include demonstrating workplace skills in a health science professional setting or educational facility. Instruction includes health literacy, introduction to organization of the body, medical terminology and medical math, analysis, and application of emergency and technical skills, as well as a deeper analysis of legal and ethical issues within healthcare.

STANDARDS AND INDICATORS:

HS.HS.7.1 Distinguish between the wide variety of Health Professions.

HS.HS.7.1.a Compare various careers from multiple pathways.

HS.HS.7.1.b Compare job outlook projections for healthcare careers on a local, state, and national level.

HS.HS.7.1.c Demonstrate workplace skills in an experience at a health science professional setting or educational facility (i.e. job shadow, interview of a professional, visit to an educational program).

HS.HS.7.2 Analyze health information to develop health literacy.

HS.HS.7.2.a Describe the fundamentals of health, wellness, and disease prevention.

HS.HS.7.2.b Explain physical, mental, social, and behavioral health and its impact on healthcare, disease, and prevention.

HS.HS.7.2.c Explain social health issues & the impact of the issues on society.

HS.HS.7.2.d Differentiate between complementary and alternative health practices as they relate to wellness and disease prevention.

HEALTH SCIENCES II (cont.)

HS.HS.7.3 Apply academic principles used within the healthcare system.

HS.HS.7.3.a Identify basic structure, common word parts, and abbreviations in medical terminology.

HS.HS.7.3.b Describe the organization of the human body.

HS.HS.7.3.c Interpret diagrams, charts, graphs, and tables and articulate healthcare results.

HS.HS.7.3.d Apply math principles integral to basic medical applications.

HS.HS.7.4 Analyze various health situations, applying technical skills including basic first aid, CPR/AED, and measurement of vital signs.

HS.HS.7.4.a Demonstrate procedures for measuring vital signs and interpreting the results.

HS.HS.7.4.b Demonstrate appropriate response skills to first aid and emergency situations.

HS.HS.7.4.c Differentiate between infectious agents.

HS.HS.7.4.d Apply methods to control the spread of infection.

HS.HS.7.5 Analyze legal and ethical issues in healthcare.

HS.HS.7.5.a Explain accepted ethical practices with respect to cultural, religious, social, and ethnical differences within the healthcare environment.

HS.HS.7.5.b Differentiate between ethical and legal issues impacting healthcare.

HS.HS.7.5.c Analyze the legal responsibilities, limitations, and implications relating to regulations, policies, laws, and patient rights.

MEDICAL TERMINOLOGY

COURSE DESCRIPTION

This course is designed to help students learn medical language by analyzing its components. The primary focus is on developing both oral and written skills in the language used to communicate within health care professions. This course is a fundamental course for students who are pursuing a career in the healthcare profession. It is the basic language required for all areas of health science and is required for any health care profession beginning with entry level staff.

STANDARDS AND INDICATORS:

HS.HS.11.1 Apply medical terminology.

HS.HS.11.1.a Explain the construction of medical terms including singular and plural form as well as prefixes, suffixes, roots, and combinations.

HS.HS.11.1.b Extract medical information from realistic medical references/documents, hospital medical records, and case studies.

HS.HS.11.1.c Apply medical terminology to real-life scenarios.

HS.HS.11.1.d Apply medical terms relating to medical specialties or personnel, pathology, surgical, and diagnostic procedures.

HS.HS.11.2 Apply medical abbreviations.

HS.HS.11.2.a Identify acceptable and error-prone abbreviations and symbols.

HS.HS.11.2.b Determine time using the 24-hour clock.

HS.HS.11.2.c Apply identified medical abbreviations, symbols, numbers, and quantity measures.

HS.HS.11.3 Apply anatomical terms.

HS.HS.11.3.a Identify terms associated with the planes, cavities, and regions of the body.

HS.HS.11.3.b Describe standard anatomical position as a reference point for identifying areas of the body and organs.

HS.HS.11.3.c Apply directional terms.

MEDICAL TERMINOLOGY (cont.)

HS.HS.11.4 Interpret medical terms related to the anatomy and physiology of body systems.

HS.HS.11.4.a Describe the basic structural and functional organization of the human body and the systems of the body, including the integumentary, cardiovascular, musculoskeletal, immune, respiratory, digestive, urinary, reproductive, nervous, and endocrine systems.

HS.HS.11.4.b Describe the inter-relationship between body systems.

HS.HS.11.4.c Describe common diseases and disorders of each body system.

HEALTH INFORMATION TECHNOLOGY

COURSE DESCRIPTION

Health Information Technology is the management and use of information in Health Sciences related to, but not limited to, communications, legal and ethical implications, data management and organization, and technology applications. Completion of this course allows the student to obtain entry-level competencies defined by the American Health Information Management Association. These are nationally accepted standards of practitioner roles and functions.

STANDARDS AND INDICATORS:

HS.HS.5.1 Summarize the purposes and content of the medical record.

HS.HS.5.1.a	Describe how health data is used by various individuals and groups.
HS.HS.5.1.b	Define key words and abbreviations.
HS.HS.5.1.c	Identify key organizations external to the health care facility that influence data collection.
HS.HS.5.1.d	Describe the typical forms/screens used to collect data in a patient record and the types of data collected in each.
HS.HS.5.1.e	List the general design principles to consider when creating or revising a form/screen to collect data.
HS.HS.5.1.f	Explain the three types of documentation analysis: quantitative, qualitative, and statistical.
HS.HS.5.1.g	Compare the following record formats: source-oriented, problem-oriented, and integrated.

HEALTH INFORMATION TECHNOLOGY (cont.)

HS.HS.5.2 Explain the role of the Health Information Technology Department in a healthcare facility.

HS.HS.5.2.a Describe the various functions of a health record department.

HS.HS.5.2.b Describe confidentiality and concerns related to protection of patient data to preserve confidentiality.

HS.HS.5.2.c Explain the development of the Health Information Management (HIM) profession and emerging roles of HIM professionals.

HS.HS.5.2.d Describe the purpose and the sponsor of various data sets and databases.

HS.HS.5.2.e Explain the purpose of the AHIMA Code of Ethics.

HS.HS.5.3 Explain HIM certification and HIM professional development opportunities.

HS.HS.5.3.a Identify the requirements for initial and continuing certification within the HIM profession.

HS.HS.5.3.b Describe the benefits of membership in a professional association.

HS.HS.5.3.c Identify various resources for HIM professional development including, but not limited to, the Journal of AHIMA, publications of AIMA, the internet web site of AIMA, other related web sites, and the FORE library.

HS.HS.5.4 Explain storage and retrieval of patient data records.

HS.HS.5.4.a Identify systems for storage of patient records.

HS.HS.5.4.b Describe the concept of a "unit" record and its advantages and disadvantages.

HS.HS.5.4.c Retrieve data elements from patients' records and databases.

HS.HS.5.4.d List ways to safeguard patient information.

HS.HS.5.4.e Describe systems/procedures for handling incomplete health records.

HS.HS.5.4.f Describe manual and automated record tracking systems.

HS.HS.5.4.g Explain the value of the master patient index (MPI) in accessing patient records.

HEALTH SCIENCE I

COURSE DESCRIPTION

Health Sciences 1 is designed to give an overview of the therapeutic services, diagnostic services, support services, biotechnology research and development, and health informatics pathways. The course focuses on exploring health science pathways and careers, employability skills, ethical and legal responsibilities, safety practices and technical skills, and the history and current healthcare trends.

STANDARDS AND INDICATORS:

HS.HS.6.1 Explain the history, trends, and career pathways within the healthcare system.

- HS.HS.6.1.a Identify the history of health care.
- HS.HS.6.1.b Identify current trends in healthcare and how they impact healthcare and society.
- HS.HS.6.1.c Describe the various healthcare career pathways.
- HS.HS.6.1.d Describe healthcare careers.
- HS.HS.6.1.e Compare healthcare delivery systems and related agencies.

HS.HS.6.2 Describe legal and ethical standards of healthcare.

- HS.HS.6.2.a Identify aspects of legal considerations related to healthcare.
- HS.HS.6.2.b Describe ethical practices with respect to cultural, social, and ethnical differences within the healthcare environment.

HEALTH SCIENCES I (cont.)

HS.HS.6.3 Analyze career readiness skills to enhance employment opportunities and job satisfaction within the healthcare industry.

HS.HS.6.3.a	Identify personal traits and attitudes desirable in a member of a healthcare team.
HS.HS.6.3.b	Identify common barriers to communication between healthcare professionals and patients.
HS.HS.6.3.c	Summarize professional standards as they apply to various healthcare settings.
HS.HS.6.3.d	Explain the role of medical terminology in effective communication in health care.
HS.HS.6.3.e	Demonstrate characteristics of an effective team.
HS.HS.6.3.f	Demonstrate various forms of professional communication.
HS.HS.6.3.g	Analyze personal aptitudes and interests related to health careers.

HS.HS.6.4 Apply technical skills of healthcare professions.

HS.HS.6.4.a	Identify existing and potential safety hazards to clients, co-workers, self, and environment within the healthcare setting.
HS.HS.6.4.b	Describe proper body mechanics.
HS.HS.6.4.c	Demonstrate methods to control the spread of infection.
HS.HS.6.4.d	Demonstrate procedures for measuring and recording vital signs.
HS.HS.6.4.e	Apply skills to obtain training or certification in cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.

HEALTH SCIENCE II

COURSE DESCRIPTION

Health Sciences II is designed to provide students a more in-depth exploration of personal interests within healthcare as well as a deeper analysis of the healthcare system overall. The course will include demonstrating workplace skills in a health science professional setting or educational facility. Instruction includes health literacy, introduction to organization of the body, medical terminology and medical math, analysis, and application of emergency and technical skills, as well as a deeper analysis of legal and ethical issues within healthcare.

STANDARDS AND INDICATORS:

HS.HS.7.1 Distinguish between the wide variety of Health Professions.

HS.HS.7.1.a Compare various careers from multiple pathways.

HS.HS.7.1.b Compare job outlook projections for healthcare careers on a local, state, and national level.

HS.HS.7.1.c Demonstrate workplace skills in an experience at a health science professional setting or educational facility (i.e. job shadow, interview of a professional, visit to an educational program).

HS.HS.7.2 Analyze health information to develop health literacy.

HS.HS.7.2.a Describe the fundamentals of health, wellness, and disease prevention.

HS.HS.7.2.b Explain physical, mental, social, and behavioral health and its impact on healthcare, disease, and prevention.

HS.HS.7.2.c Explain social health issues & the impact of the issues on society.

HS.HS.7.2.d Differentiate between complementary and alternative health practices as they relate to wellness and disease prevention.

HEALTH SCIENCES II (cont.)

HS.HS.7.3 Apply academic principles used within the healthcare system.

HS.HS.7.3.a Identify basic structure, common word parts, and abbreviations in medical terminology.

HS.HS.7.3.b Describe the organization of the human body.

HS.HS.7.3.c Interpret diagrams, charts, graphs, and tables and articulate healthcare results.

HS.HS.7.3.d Apply math principles integral to basic medical applications.

HS.HS.7.4 Analyze various health situations, applying technical skills including basic first aid, CPR/AED, and measurement of vital signs.

HS.HS.7.4.a Demonstrate procedures for measuring vital signs and interpreting the results.

HS.HS.7.4.b Demonstrate appropriate response skills to first aid and emergency situations.

HS.HS.7.4.c Differentiate between infectious agents.

HS.HS.7.4.d Apply methods to control the spread of infection.

HS.HS.7.5 Analyze legal and ethical issues in healthcare.

HS.HS.7.5.a Explain accepted ethical practices with respect to cultural, religious, social, and ethnical differences within the healthcare environment.

HS.HS.7.5.b Differentiate between ethical and legal issues impacting healthcare.

HS.HS.7.5.c Analyze the legal responsibilities, limitations, and implications relating to regulations, policies, laws, and patient rights.

MEDICAL TERMINOLOGY

COURSE DESCRIPTION

This course is designed to help students learn medical language by analyzing its components. The primary focus is on developing both oral and written skills in the language used to communicate within health care professions. This course is a fundamental course for students who are pursuing a career in the healthcare profession. It is the basic language required for all areas of health science and is required for any health care profession beginning with entry level staff.

STANDARDS AND INDICATORS:

HS.HS.11.1 Apply medical terminology.

HS.HS.11.1.a Explain the construction of medical terms including singular and plural form as well as prefixes, suffixes, roots, and combinations.

HS.HS.11.1.b Extract medical information from realistic medical references/documents, hospital medical records, and case studies.

HS.HS.11.1.c Apply medical terminology to real-life scenarios.

HS.HS.11.1.d Apply medical terms relating to medical specialties or personnel, pathology, surgical, and diagnostic procedures.

HS.HS.11.2 Apply medical abbreviations.

HS.HS.11.2.a Identify acceptable and error-prone abbreviations and symbols.

HS.HS.11.2.b Determine time using the 24-hour clock.

HS.HS.11.2.c Apply identified medical abbreviations, symbols, numbers, and quantity measures.

HS.HS.11.3 Apply anatomical terms.

HS.HS.11.3.a Identify terms associated with the planes, cavities, and regions of the body.

HS.HS.11.3.b Describe standard anatomical position as a reference point for identifying areas of the body and organs.

HS.HS.11.3.c Apply directional terms.

MEDICAL TERMINOLOGY (cont.)

HS.HS.11.4 Interpret medical terms related to the anatomy and physiology of body systems.

HS.HS.11.4.a Describe the basic structural and functional organization of the human body and the systems of the body, including the integumentary, cardiovascular, musculoskeletal, immune, respiratory, digestive, urinary, reproductive, nervous, and endocrine systems.

HS.HS.11.4.b Describe the inter-relationship between body systems.

HS.HS.11.4.c Describe common diseases and disorders of each body system.

HEALTH SCIENCE III

COURSE DESCRIPTION

Health Sciences III is designed to expand students' understanding of health sciences through body systems, diseases and disorders, medical terminology, and healthcare economics. Students will generate a solution to a public health issue by obtaining data, applying professional communication, and following legal and ethical standards. Students should acquire basic first aid and CPR/AED (re)certification. Students will continue to gain authentic healthcare career experiences from a health science professional, setting, or educational facility.

STANDARDS AND INDICATORS:

HS.HS.8.1 Describe human anatomy, physiology, common diseases and disorders, and medical terminology.

- HS.HS.8.1.a Identify basic structures and functions of human body systems.
- HS.HS.8.1.b Describe common diseases and disorders related to body systems.
- HS.HS.8.1.c Interpret common roots, prefixes, and suffixes of medical terminology to communicate information related to body systems.

HS.HS.8.2 Analyze components of healthcare economics.

- HS.HS.8.2.a Describe consumer rights and responsibilities within the healthcare system.
- HS.HS.8.2.b Compare types of health care insurance, including private, managed care, and government programs.
- HS.HS.8.2.c Analyze local healthcare availability and accessibility.

HS.HS.8.3 Evaluate various health situations, applying technical skills including basic first aid, CPR/AED, and interpretation of vital sign measurements.

- HS.HS.8.3.a Demonstrate procedures for measuring vital signs and interpreting results.
- HS.HS.8.3.b Demonstrate industry/professional Basic First Aid and CPR/AED or Basic Life Support skills to acquire certification.
- HS.HS.8.3.c Evaluate the use of first aid and emergency responses, defending appropriate response actions.

HEALTH SCIENCES III (cont.)

HS.HS.8.4 Demonstrate healthcare career readiness skills through an experience in a health science professional setting or educational facility.

HS.HS.8.4.a Identify career readiness skills and existing and potential safety hazards within healthcare settings.

HS.HS.8.4.b Compare levels of healthcare professionals and their roles within the healthcare system.

HS.HS.8.4.c Demonstrate career readiness skills and competencies through an experience in a health science professional setting or educational facility (i.e. job shadowing, interview, visit to a professional or educational setting).

HS.HS.8.5 Generate a solution to a community health issue.

HS.HS.8.5.a Obtain community health information and data from health professionals and professional sources.

HS.HS.8.5.b Implement a plan to address a community health issue.

HS.HS.8.5.c Apply legal and ethical considerations to the project (HIPAA, data selection process).

HS.HS.8.5.d Exhibit professional communication skills when working with community stakeholders.

NURSING ASSISTANT / CNA CERTIFICATION

COURSE DESCRIPTION

This is a basic nursing knowledge and skills course for the nurse assistant in a health care setting. It meets the requirements of Public Law 100-203 OBRA and is approved by the Nebraska Department of Health. This course is required to be taught by an R.N. In order for students to receive high school credit, arrangements need to be made to ensure teaching certification.

This Nebraska Department of Health and Human Services document shows Title 172 Chapter 108: approval of training programs and qualifications for nursing assistants in nursing homes.

STANDARDS AND INDICATORS:

HS.HS.13.1 Demonstrate proficiency in the required academic subject matter outlined by 172 NE Admin Rules and Regs ch 172-108-003.

HS.HS.13.1.a Complete a minimum of 75 hours of instruction including at least 16 hours of supervised practical training, including at least one hour of instruction on the responsibility of each nursing assistant to report suspected abuse or neglect pursuant to Neb. Rev. Stat. §§ 28-372 and 28-711 (108-003.01).

HS.HS.13.1.b Demonstrate proficiency in tasks or duties connected with each unit of the components set forth in 172 NAC 108-003 (108-003.03).

HS.HS.13.1.c Complete an approved competency evaluation program consisting of a written or oral examination and a demonstration of skills administered by the Department of Health & Human Services or a Department-approved entity that is not a nursing home that participates in Medicare or Medicaid. (108-003.04)

HS.HS.13.2 Demonstrate career readiness skills to enhance employment opportunities and job satisfaction.

HS.HS.13.2.a Identify the elements of communication using a sender/receiver mode.

HS.HS.13.2.b Identify barriers to communication.

HS.HS.13.2.c Interpret verbal and nonverbal communication.

HS.HS.13.2.d Explain subjective and objective information.

HS.HS.13.2.e Apply speaking and active listening skills.

HS.HS.13.2.f Explain opportunities for continuing education and professional development.

HS.HS.13.2.g Demonstrate the career readiness skills of the healthcare professional.

NURSING ASSISTANT / CNA CERTIFICATION (cont.)

HS.HS.3 Apply healthcare regulations, policies, laws, and legislated rights of clients.

HS.HS.13.3.a	Describe the legal and ethical responsibilities, limitations, and implications of one's actions within the healthcare delivery setting.
HS.HS.13.3.b	Explain standards for Health Insurance Portability and Accountability Act (HIPAA).
HS.HS.13.3.c	Describe advance directives.
HS.HS.13.3.d	Summarize the Patient's Bill of Rights.
HS.HS.13.3.e	Explain tort laws as they apply to healthcare.
HS.HS.13.3.f	Demonstrate procedures for accurate documentation and record keeping.

HS.HS.4 Apply health and safety policies and procedures to prevent injury and illness.

HS.HS.13.4.a	Describe the existing and potential hazards in a healthcare setting to clients, co-workers, and self.
HS.HS.13.4.b	Apply personal safety procedures based on Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations.
HS.HS.13.4.c	Apply principles of body mechanics.
HS.HS.13.4.d	Comply with safety signs, symbols, and labels in the work environment.
HS.HS.13.4.e	Demonstrate fire safety and basic emergency response in a healthcare setting.

EMT CERTIFICATION

COURSE DESCRIPTION

This course is designed based upon the Department of Transportation's National Highway Traffic Safety Administration Emergency Medical Technician–Basic National Standard Curriculum. This course is designed to instruct the student to the level of Emergency Medical Technician who serves as a vital link in the chain of the healthcare team. It is recognized that the majority of pre-hospital emergency medical care will be provided by the EMT. This includes all skills necessary for the individual to provide emergency medical care at a basic life level with an ambulance service or other specialized service. This course is designed to prepare the student to take and pass the National Registry certification examination. The course must be taught by a qualified EMT instructor. (NHTSA-EMTBNSC)

STANDARDS AND INDICATORS:

HS.HS.3.1 Assess the nature and seriousness of a patient's condition or extent of injuries to prioritize requirements for emergency medical care.

- HS.HS.3.1.a Perform a scene size up.
- HS.HS.3.1.b Perform an initial patient assessment to quickly and accurately determine if a patient is sick or injured.
- HS.HS.3.1.c Develop a plan for emergency medical care.

HS.HS.3.2 Administer appropriate emergency medical care based on assessment findings of a patient's condition.

- HS.HS.3.2.a Establish and maintain a patent airway for the patient.
- HS.HS.3.2.b Administer appropriate pharmacologic interventions.
- HS.HS.3.2.c Demonstrate appropriate care and management for medical emergencies.
- HS.HS.3.2.d Demonstrate appropriate care and management for trauma emergencies.

HS.HS.3.3 Demonstrate appropriate transport methods for the patient to minimize discomfort and prevent further injury.

- HS.HS.3.3.a Apply the principles of stabilizing, lifting, and carrying.
- HS.HS.3.3.b Demonstrate the proper use of transport equipment.

MEDICATION AIDE CERTIFICATION

COURSE DESCRIPTION

Medication Aide is a course in which an individual receives training in administering medications. This course has a minimum requirement of 40 hours, and students must be 18 years of age in order to sit for the written exam administered by the state board of Health and Human Services. This course must be taught by an R.N. licensed in QMA.

STANDARDS AND INDICATORS:

HS.HS.12.1 Demonstrate key proficiencies of medication aides.

HS.HS.12.1.a Physically demonstrate giving or applying the right medication to the right person at the right time, in the right dose, and by the right route.

HS.HS.12.1.b Demonstrate evidence of proper record-keeping of medication dosages and timing.

HS.HS.12.1.c Demonstrate proper monitoring of patients for desired effects and any side effects, interactions, and contraindications associated with medications.

HS.HS.12.2 Demonstrate key career readiness skills of medication aides.

HS.HS.12.2.a Describe traits of a healthcare professional.

HS.HS.12.2.b Recognize barriers and elements of communication.

HS.HS.12.2.c Recognize subjective and objective information.

HS.HS.12.2.d Demonstrate the ability to follow verbal and nonverbal instructions, including reading and listening.

HS.HS.12.2.e Demonstrate effective communication, active listening, and interpersonal skills with patients and healthcare professionals.

MEDICATION AIDE CERTIFICATION (cont.)

HS.HS.12.3 Apply regulations, policies, laws and legislated rights of clients in the healthcare setting.

HS.HS.12.3.a Describe the legal and ethical responsibilities, limitations, and implications of personal actions within the healthcare delivery setting.

HS.HS.12.3.b Summarize the patient's Bill of Rights.

HS.HS.12.3.c Describe the laws governing harassment, abuse, and neglect.

HS.HS.12.3.d Apply confidentiality standards for Health Insurance Portability and Accountability Act (HIPAA).

HS.HS.12.4 Apply safe work practices and health and safety policies and procedures to prevent injury and illness.

HS.HS.12.4.a Describe existing and potential hazards to clients, co-workers, and self.

HS.HS.12.4.b Interpret safety signs, symbols, and labels in the work environment.

HS.HS.12.4.c Apply personal safety procedures based on Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations.

HEALTH SCIENCE I

COURSE DESCRIPTION

Health Sciences 1 is designed to give an overview of the therapeutic services, diagnostic services, support services, biotechnology research and development, and health informatics pathways. The course focuses on exploring health science pathways and careers, employability skills, ethical and legal responsibilities, safety practices and technical skills, and the history and current healthcare trends.

STANDARDS AND INDICATORS:

HS.HS.6.1 Explain the history, trends, and career pathways within the healthcare system.

- HS.HS.6.1.a Identify the history of health care.
- HS.HS.6.1.b Identify current trends in healthcare and how they impact healthcare and society.
- HS.HS.6.1.c Describe the various healthcare career pathways.
- HS.HS.6.1.d Describe healthcare careers.
- HS.HS.6.1.e Compare healthcare delivery systems and related agencies.

HS.HS.6.2 Describe legal and ethical standards of healthcare.

- HS.HS.6.2.a Identify aspects of legal considerations related to healthcare.
- HS.HS.6.2.b Describe ethical practices with respect to cultural, social, and ethnical differences within the healthcare environment.

HEALTH SCIENCES I (cont.)

HS.HS.6.3 Analyze career readiness skills to enhance employment opportunities and job satisfaction within the healthcare industry.

HS.HS.6.3.a Identify personal traits and attitudes desirable in a member of a healthcare team.

HS.HS.6.3.b Identify common barriers to communication between healthcare professionals and patients.

HS.HS.6.3.c Summarize professional standards as they apply to various healthcare settings.

HS.HS.6.3.d Explain the role of medical terminology in effective communication in health care.

HS.HS.6.3.e Demonstrate characteristics of an effective team.

HS.HS.6.3.f Demonstrate various forms of professional communication.

HS.HS.6.3.g Analyze personal aptitudes and interests related to health careers.

HS.HS.6.4 Apply technical skills of healthcare professions.

HS.HS.6.4.a Identify existing and potential safety hazards to clients, co-workers, self, and environment within the healthcare setting.

HS.HS.6.4.b Describe proper body mechanics.

HS.HS.6.4.c Demonstrate methods to control the spread of infection.

HS.HS.6.4.d Demonstrate procedures for measuring and recording vital signs.

HS.HS.6.4.e Apply skills to obtain training or certification in cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.

MEDICAL TERMINOLOGY

COURSE DESCRIPTION

This course is designed to help students learn medical language by analyzing its components. The primary focus is on developing both oral and written skills in the language used to communicate within health care professions. This course is a fundamental course for students who are pursuing a career in the healthcare profession. It is the basic language required for all areas of health science and is required for any health care profession beginning with entry level staff.

STANDARDS AND INDICATORS:

HS.HS.11.1 Apply medical terminology.

HS.HS.11.1.a Explain the construction of medical terms including singular and plural form as well as prefixes, suffixes, roots, and combinations.

HS.HS.11.1.b Extract medical information from realistic medical references/documents, hospital medical records, and case studies.

HS.HS.11.1.c Apply medical terminology to real-life scenarios.

HS.HS.11.1.d Apply medical terms relating to medical specialties or personnel, pathology, surgical, and diagnostic procedures.

HS.HS.11.2 Apply medical abbreviations.

HS.HS.11.2.a Identify acceptable and error-prone abbreviations and symbols.

HS.HS.11.2.b Determine time using the 24-hour clock.

HS.HS.11.2.c Apply identified medical abbreviations, symbols, numbers, and quantity measures.

HS.HS.11.3 Apply anatomical terms.

HS.HS.11.3.a Identify terms associated with the planes, cavities, and regions of the body.

HS.HS.11.3.b Describe standard anatomical position as a reference point for identifying areas of the body and organs.

HS.HS.11.3.c Apply directional terms.

MEDICAL TERMINOLOGY (cont.)

HS.HS.11.4 Interpret medical terms related to the anatomy and physiology of body systems.

HS.HS.11.4.a Describe the basic structural and functional organization of the human body and the systems of the body, including the integumentary, cardiovascular, musculoskeletal, immune, respiratory, digestive, urinary, reproductive, nervous, and endocrine systems.

HS.HS.11.4.b Describe the inter-relationship between body systems.

HS.HS.11.4.c Describe common diseases and disorders of each body system.

NUTRITION

(from the Human Sciences and Education Standards)

COURSE DESCRIPTION

This intermediate course provides students with an introduction to the science of nutrition building on concepts from the introductory course. Topics covered include careers in nutrition, digestion and metabolism, functions of the six essential nutrients, nutrient recommendations, diets, meal planning, creating accommodations for consumers, and impacts of the national food system on production and consumerism. Food safety will also be reinforced in this course through hands-on learning opportunities.

STANDARDS AND INDICATORS:

HSE.HS.32.1 Analyze career paths within the food, nutrition, and wellness field.

HSE.HS.32.1.a Summarize education, training, and credentialing requirements and career opportunities in the food, nutrition, and wellness field.

HSE.HS.32.1.b Differentiate between personal attitudes and traits of food, nutrition, and wellness professionals in regards to responsibility, accountability, ethics, and effectiveness in the workplace.

HSE.HS.32.2 Identify and Explain the parts and functions of the digestive system.

HSE.HS.32.2.a Identify the anatomy of the gastrointestinal system.

HSE.HS.32.2.b Explain the digestive process.

HSE.HS.32.2.c Explain the utilization and short, medium, and long-term storage of nutrients inside the body.

HSE.HS.32.2.d Explain how the body excretes waste products.

NUTRITION (cont.)

HSE.HS.32.3 Analyze individual characteristics specific to macronutrients, micronutrients, and water.

HSE.HS.32.3.a Identify the chemical composition and energy yield of carbohydrates, proteins, and fats.

HSE.HS.32.3.b Differentiate between soluble and insoluble fiber and complete and incomplete proteins.

HSE.HS.32.3.c Identify the functions of vitamins, minerals, and water.

HSE.HS.32.3.d Identify the categories of vitamins (including fat and water soluble) and minerals (including major and trace).

HSE.HS.32.3.e Identify the recommended intake levels of and food sources high in vitamins, minerals, and water.

HSE.HS.32.3.f Explain deficiencies and toxicities related to vitamin and mineral consumption.

HSE.HS.32.4 Analyze current dietary recommendations and guidelines for planning a healthy diet.

HSE.HS.32.4.a Explain the Dietary Reference Intake terms Estimated Average Requirement (EAR), Recommended Daily Allowance (RDA), Adequate Intake (AI), and Tolerable Upper Intake Level (UL).

HSE.HS.32.4.b Describe the concepts of variety, moderation, and balance as the foundation of a healthy diet.

HSE.HS.32.4.c Compare and contrast various food recording tools.

HSE.HS.32.4.d Utilize nutrition information to calculate nutrient composition of foods, meals, and daily intake.

HSE.HS.32.4.e Discuss short- and long-term impact of current dietary intake habits.

HSE.HS.32.4.f Compare and contrast the nutrient density of whole foods, convenience foods, and prepared foods to make informed food choices.

NUTRITION (cont.)

HSE.HS.32.5 Analyze the effects of dietary patterns and practices on an individual's health and well-being across the lifespan.

HSE.HS.32.5.a Identify a variety of healthy dietary patterns.

HSE.HS.32.5.b Compare and contrast popular fad diets and food industry trends.

HSE.HS.32.5.c Describe energy balance, physical activity, and weight control to prevent obesity and achieve nutritional adequacy.

HSE.HS.32.5.d Explain weight gain/weight loss concepts considering basal metabolic rate (BMR) and total daily energy expenditure (TDEE).

HSE.HS.32.5.e Identify the prevention, symptoms, and treatment of eating disorders.

HSE.HS.32.5.f Compare and contrast food allergies and food intolerances.

HSE.HS.32.5.g Apply dietary recommendations and guidelines to design meal plans for individuals with special dietary needs (e.g., heart disease, diabetes, celiac disease, etc.)

HSE.HS.32.6 Analyze U.S. and global food systems and impacts on individual, family, and community health.

HSE.HS.32.6.a Explain the biological, social, psychological, economic, political, and/or cultural influences on individual and community nutrition practices.

HSE.HS.32.6.b Summarize the effects of social determinants on personal food choices, food systems, and public health.

HSE.HS.32.6.c Explain the impact of cultural influences on food consumption and traditions within family units.

HSE.HS.32.6.d Analyze the impact of the rising cost of food, poverty, food deserts, food insecurity, and the growing world population on individuals, families, communities, and society.

HSE.HS.32.6.e Compare and contrast food and nutrition policies and their impact on individuals, families, communities, and society.

HSE.HS.32.6.f Discuss different approaches and solutions including the critical science perspective to address food system change through advocacy, policy, and/or political action.

INTRODUCTION TO SPORTS MEDICINE

COURSE DESCRIPTION

This course is designed for students who may be interested in a career in Sports Medicine. This course should feature the prevention, recognition, treatment, and rehabilitation of illness or injury caused by physical activity or athletics. Topics may include proper bracing and supporting, use of protective gear, treatment modalities, anatomy and physiology, body mechanics, and medical terminology. Students may learn to measure cardiorespiratory endurance, flexibility, body composition, and blood pressure.

STANDARDS AND INDICATORS:

HS.HS.10.1 Analyze information related to sports medicine fields.

HS.HS.10.1.a Identify the careers that make up a sports medicine team.

HS.HS.10.1.b Compare various careers related to sports medicine.

HS.HS.10.1.c Describe legal issues surrounding sports medicine.

HS.HS.10.1.d Describe how psychological factors influence sports, exercise, and physical activity.

HS.HS.10.1.e Connect related medical terminology to the human body.

HS.HS.10.1.f Exhibit sports medicine career readiness skills through an authentic experience (i.e. job shadow, interview a professional, hands-on clinical simulation, visit to a professional setting, guest speaker).

HS.HS.10.2 Explain injury prevention principles and performance enhancement philosophies.

HS.HS.10.2.a Explain how proper conditioning, strength training, and body mechanics practices serve as preventive measures to various types of illness and injury.

HS.HS.10.2.b Explain non-pharmaceutical performance enhancement methods for controlling body movement during sports, exercise, and physical activity.

INTRODUCTION TO SPORTS MEDICINE (cont.)

HS.HS.10.3 Analyze the impact of sports nutrition on injury prevention and the recovery process.

HS.HS.10.3.a Explain the key components of dietary recommendations for proper nutrition.

HS.HS.10.3.b Explain the impact of nutrition on injury and the healing process.

HS.HS.10.3.c Analyze the role of nutrition in exercise and sports performance.

HS.HS.10.4 Evaluate common and sports-specific injuries, injury management, and rehabilitation techniques.

HS.HS.10.4.a Identify sports-specific injuries and medical conditions affecting the musculoskeletal and nervous systems.

HS.HS.10.4.b Demonstrate proper management of injuries and medical conditions with non-surgical interventions (i.e. bracing, taping).

HS.HS.10.4.c Analyze therapeutic modalities for treatment and intervention.

LIFESPAN NUTRITION & WELLNESS

(from the Human Sciences and Education Standards)

COURSE DESCRIPTION

This capstone course focuses on nutritional needs throughout the lifespan building on concepts from the introductory and intermediate courses. This course focuses on connecting lifespan development to nutrition and exercise practices with the intent of contributing to wellness and longevity. Food safety will also be reinforced in this course through hands-on learning opportunities.

STANDARDS AND INDICATORS:

HSE.HS.31.1 Identify and explain basic nutrition principles for meeting nutrition and wellness needs.

- HSE.HS.31.1.a Identify the function and nutrient dense sources of the six essential nutrients.
- HSE.HS.31.1.b Explain current dietary recommendations.
- HSE.HS.31.1.c Calculate energy intake for weight management.
- HSE.HS.31.1.d Describe useful nutrition assessment tools for use with each stage of the lifespan.
- HSE.HS.31.1.e Explain resources for nutrition and wellness needs to use with each stage of the lifespan.

HSE.HS.31.2 Evaluate nutrition and wellness needs during pre-conception, pregnancy, and lactation.

- HSE.HS.31.2.a Analyze the essential nutrients for optimal health for individuals during pre-conception, pregnancy and lactation.
- HSE.HS.31.2.b Explain nutrition-related medical conditions that may occur during pregnancy and their impact on the mother and fetus.
- HSE.HS.31.2.c Classify the recommendations for physical activity during preconception and pregnancy.
- HSE.HS.31.2.d Compare and contrast the ideal diet for a pregnant woman with the ideal diet for a lactating mother, highlighting the specific nutritional differences.
- HSE.HS.31.2.e Explain circumstances under which a mother should not breastfeed.

LIFESPAN NUTRITION & WELLNESS (cont.)

HSE.HS.31.3 Evaluate nutrition and wellness needs during infancy, toddler, preschool, and middle childhood stages.

HSE.HS.31.3.a Summarize the connection between good nutrition and physical, intellectual, emotional, and social development.

HSE.HS.31.3.b Identify diet recommendations for infants, toddlers, preschoolers, and primary grade children.

HSE.HS.31.3.c Compare the nutritional value of breastmilk to the nutritional value of formula.

HSE.HS.31.3.d Explain specific nutrient roles in the body of a developing child, giving special attention to vitamins and minerals.

HSE.HS.31.3.e Examine the role of a caregiver in providing food from infancy through middle childhood.

HSE.HS.31.3.f Describe the challenges associated with children's diets and outline strategies for dealing with such problems (e.g., childhood allergies, childhood obesity, aversions, influence of media and screen time).

HSE.HS.31.4 Evaluate nutrition and wellness needs during adolescence.

HSE.HS.31.4.a Explain the growth and consequent nutritional needs of adolescence.

HSE.HS.31.4.b Describe how eating patterns in adolescents affect overall health (e.g., sleep quality, energy, mood, physical development).

HSE.HS.31.4.c Identify nutrition-related medical conditions that may occur during adolescence along with prevention/intervention strategies.

HSE.HS.31.4.d Explain the spectrum of body dissatisfaction, dieting, disordered eating, and eating disorders.

HSE.HS.31.4.e Explain the recommendations for physical activity during adolescence.

LIFESPAN NUTRITION & WELLNESS (cont.)

HSE.HS.31.5 Evaluate the difference between the recommendations for a typical adolescent versus an adolescent involved in vigorous physical activity.

HSE.HS.31.5.a Describe the role of each nutrient for peak performance of the physically active adolescent.

HSE.HS.31.5.b Differentiate nutrient needs based on type, frequency, intensity, and duration of exercise.

HSE.HS.31.5.c Summarize the recommendations for assessing and maintaining healthy hydration.

HSE.HS.31.5.d Evaluate pre- and post-workout diet plans and timing of meals and snack intake for the physically active adolescent.

HSE.HS.3156.e Describe supplements and their use.

HSE.HS.31.6 Evaluate nutrition and wellness needs during adulthood and older adulthood.

HSE.HS.31.6.a Identify nutrient needs for adulthood and why they change over time.

HSE.HS.31.6.b Outline nutrition-related medical conditions that may occur during adulthood along with prevention/intervention strategies.

HSE.HS.31.6.c Identify strategies for weight management and the challenges of weight management during adulthood and older adulthood.

HSE.HS.31.6.d Examine the role of nutrition in fostering longevity and in reducing the risk of chronic diseases.

HSE.HS.31.6.e Explain the recommendations for physical activity during adulthood.

HSE.HS.31.7 Identify career options as they pertain to nutrition and wellness throughout the lifespan.

HSE.HS.31.7.a Identify a variety of careers related to nutrition and wellness through the lifespan (e.g., job shadowing, guest speakers, interview professionals, visit a professional or educational setting).

HSE.HS.31.7.b Summarize skills and knowledge necessary for a successful career in nutrition and wellness careers.

HSE.HS.31.7.c Identify professional and ethical considerations in various nutrition and wellness work settings.