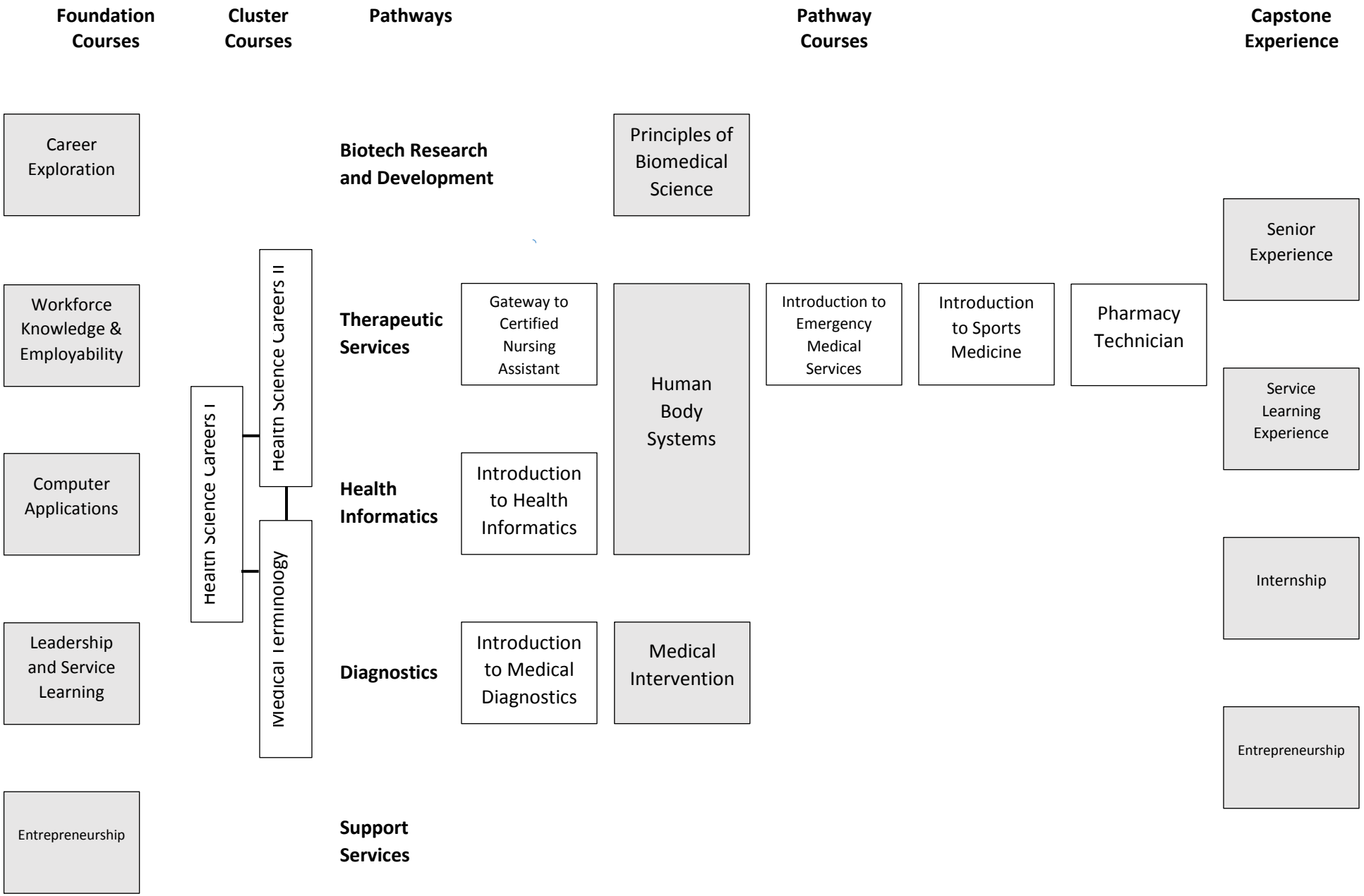
Health Sciences Programs of Study



Health Science Careers I

Career Cluster	Health Science
Course Code	14001
Prerequisite(s)	None
Credit	1.0
Graduation Requirement	None
Program of Study and Sequence	Foundation Course – **Health Science Careers I** – Health Science Careers II or Medical Terminology – Pathway Course
Student Organization	Future Health Professionals (HOSA), Skills USA
Coordinating Work-Based Learning	Job shadowing, mentoring, service learning, internship, workplace tours
Industry Certifications	
Dual Credit or Dual Enrollment	
Teacher Certification	
Resources	State and National Future Health Professionals, Conference, State and National Skills USA Conference

Course Description:

Health Science Careers I explores the current teamwork approach in health science and career options in an ever-expanding healthcare environment. Students in the course will evaluate unique abilities and explore personal career aspirations. In addition, the student will be exposed to legal, ethical, and safety implications inherent to providing high quality patient care.

Program of Study Application:

Health Science Careers I is the first cluster course in the Health Science career cluster. Completion of Health Science Careers I prepares a student to participate in Health Science Careers II or Medical Terminology and then pathway courses in any of the Health Science pathways: Biotech Research and Development, Therapeutic Services, Health Informatics, Diagnostics or Support Services.

Course Standards

HSI 1: Understand the healthcare setting networks and roles and responsibilities.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	HSI 1.1 Differentiate between private and public/government healthcare settings (managed care).	Invite guest speakers (healthcare professionals), and tour healthcare facilities.
Two Skill/Concept	HSI 1.2 Collaborate and communicate effectively with colleagues, patients/residents, and/or family members.	Speaking and listening skills in teamwork, role playing,
Three Strategic Thinking	HSI 1.3 Classify personal traits or attitudes desirable in a member of the healthcare setting.	Select a health science career pathway that is of interest.

Notes

HSI 2: Identify health science career pathways.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	HSI 2.1 Identify and compare health science career pathways.	Attend career fairs, field trips, and guest speakers (healthcare professionals). Classify careers in each health science pathway.
One Recall	HSI 2.2 Demonstrate knowledge of levels of education and credentialing requirements for a variety of health science careers of interest.	Research post-secondary options and degrees, invite guest speakers, and research state and national credentialing requirements.
One Recall	HSI 2.3 Explore and demonstrate knowledge of employment opportunities, workplace environments, and career growth potential.	Job shadowing and mentoring. Workplace tours, service learning. Invite guest speakers.

Notes

HSI 3: Examine legal/ethical responsibilities and limitations of the healthcare worker.

Webb Level	*Sub-indicator*	*Integrated Content*
Three Strategic Thinking	HSI 3.1 Understand legal/ethical issues, religious and cultural diversity and their impacts on health care.	Examine case studies, and student led presentations.
Three Strategic Thinking	HSI 3.2 Understand scope of practice and a variety of professional standards including the American Medical Association, American Nurse Association, American Dental Association.	Review American Medical Association code of ethics, review American Nurses Association code of ethics.
Three Strategic Thinking	HSI 3.3 Examine the implications of Health Insurance Portability and Accountability Act (HIPAA) for healthcare professionals.	Health Insure Portability and Accountability Act (HIPAA) training through local healthcare facility.
Three Strategic Thinking	HSI 3.4 Analyze Patient/Residents' Bill of Rights and advanced directives.	Role playing, case scenarios, research, invite guest speakers.

Notes

HSI 4: Understand and demonstrate safety practices in the healthcare environment.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	HSI 4.1 Apply principles of body mechanics and ergonomics.	Occupational Safety Health Administration (OSHA), practice on mannequins, role playing, and return skills demonstrations.
Two Skill/Concept	HSI 4.2 Identify common safety hazards in the healthcare environment including patient/resident, community, and healthcare worker settings.	Return skills demonstrations, practice safety procedures of various hazards in the healthcare environment. Occupational Safety Health Administration (OSHA).

Notes

Health Science Careers II

Career Cluster	Health Science
Course Code	14002
Prerequisite(s)	Health Science Careers I
Credit	1.0
Graduation Requirement	None
Program of Study and Sequence	Foundation Course – Health Science Careers I – **Health Science Careers II** – Medical Terminology or Pathway Course
Student Organization	Future Health Professionals (HOSA) , Skills USA
Coordinating Work-Based Learning	Workplace tours, job shadowing, mentoring, service learning, internship
Industry Certifications	First Aid, Cardiopulmonary Resuscitation (CPR), Automated External Defibrillator (AED) , Certified Nurse Assistant (CNA).
Dual Credit or Dual Enrollment	
Teacher Certification	
Resources	State and National Future Health Professionals (HOSA) Conference (Competitive events), State and National Skills USA Conference, American Red Cross, and American Heart Association.

Course Description:

Health Science Careers II will help a student discover and develop marketable and real world skills that are essential to all health care workers. This course will cover real world skills such as infection control, disease, diagnosis, treatment, hands on skills, and documentation.

Program of Study Application

Health Science Careers II is the second cluster course in the Health Science career cluster. Completion of Health Science Careers II prepares a student to participate in Medical Terminology and/or a pathway courses in any of the Health Science pathways: Biotech Research and Development, Therapeutic Services, Health Informatics, Diagnostics or Support Services.

Course Standards

HS2 1: Identify and apply principles of infection control.

Webb Level	*Sub-indicator*	*Integrated Content*
Three Strategic Thinking	HS2 1.1 Discuss the chain of infection.	Return skills demonstration, and guest speakers (healthcare professionals).
Two Skill/Concept	HS2 1.2 Understand and apply the prevention of pathogen transmission.	Return skills demonstration, and invite guest speakers, simulation lab.

Notes

HS2 2: Discuss disease, diagnosis, and treatment.

Webb Level	*Sub-indicator*	*Integrated Content*
Three Strategic Thinking	HS2 2.1 Discuss disease concept with reference to Centers for Disease Control and National Institute of Health.	Simulation lab, case scenarios, and return skills demonstration.
Three Strategic Thinking	HS2 2.2 Evaluate and assess patient/residents' health.	Simulation lab, case scenarios, and return skills demonstration.
One Recall	HS2 2.3 Recognize current treatment modalities including but not limited to obesity, heart disease, cancer, and respiratory.	Simulation lab, case scenarios for acute and chronic patient/resident conditions, and return skills demonstration.

Notes

HS2 3: Demonstrate hands-on patient/residents' care skills.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	HS2 3.1 Apply procedures for monitoring, measuring, and recording vital signs.	Simulation lab, return skills demonstrations, certifications.
Two Skill/Concept	HS2 3.2 Apply First Aid/Cardiopulmonary Resuscitation (CPR), and Automated External Defibrillator (AED).	Simulation lab, certifications, and return skills demonstration, workplace tours, invite guest speakers.
Two Skill/Concept	HS2 3.3 Demonstrate knowledge of direct patient/residents' care skills.	Simulation lab, case scenarios, and return skills demonstration, student led presentations, internship, job shadowing.

Notes

HS2 4: Explain documentation standards and findings.

Webb Level	*Sub-indicator*	*Integrated Content*
Three Strategic Thinking	HS2 4.1 Demonstrate use of technological documentation standards by entering data on the electronic medical record or paper.	Practice charting graphs, tables, diagrams on paper or Electronic Medical Record (EMR).
Three Strategic Thinking	HS2 4.2 Differentiate between subjective and objective healthcare data to communicate patient/residents' status.	Patient assessments and interviews, case scenarios, simulation lab

Notes

Medical Terminology

Career Cluster	Health Science
Course Code	14154
Prerequisite(s)	None
Credit	1.0
Graduation Requirement	No
Program of Study and Sequence	Foundation Course – Health Science Careers I – Health Science Careers II or **Medical Terminology** – Pathway Course
Student Organization	Future Health Professionals (HOSA) , Skills USA
Coordinating Work-Based Learning	Mentoring, job shadowing, internship, workplace tours, service learning
Industry Certifications	
Dual Credit or Dual Enrollment	
Teacher Certification	
Resources	State and National Future Health Professionals (HOSA) Conference (Competitive Events), State and National Skills USA Conference

Course Description:

Communication in the ever expanding health care industry is a language unto itself. Medical Terminology consists of learning medically precise pronunciations, word clues, and terminology specific to human anatomy, physiology, disease, diagnosis and treatment. This medically integrated knowledge will be valuable for all levels of health care providers and members of the health care team. Medical Terminology is recommended for students in all health science pathways.

Program of Study Application

Medical Terminology is a second cluster course in the Health Science career cluster. Completion of Medical Terminology prepares a student to participate in Health Science Careers II and/or a pathway courses in any of the Health Science pathways: Biotech Research and Development, Therapeutic Services, Health Informatics, Diagnostics or Support Services.

Career Cluster: Health Science

Course: Medical Terminology

Course Standards

MT 1: Build and interpret medical terminology.

Webb Level	*Sub-indicator*	*Integrated Content*
One Recall	MT 1.1 Decipher and create medical terms using word roots, prefixes, and suffixes.	Flashcards, competitive strategies, games, quizzing.
One Recall	MT 1.2 Demonstrate the importance, and practice the correct spelling, of medical terminology.	Written testing, quizzing, spelling games,
Two Skill/Concept	MT 1.3 Communicate patient/residents' care information utilizing medical terminology.	Practice mock charting, case scenarios.

Notes

MT 2: Demonstrate use of medical terminology in relation to the human body.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	MT 2.1 Utilize medical terminology associated with the human body and medical healthcare treatment.	Flashcards, competitive strategies, games, quizzing.
Two Skill/Concept	MT 2.2 Understand body planes, directional terms, quadrants, and cavities using medical terminology.	Flashcards, competitive strategies, games, quizzing.

Notes

MT 3: Utilize medical terminology to identify and interpret signs and symptoms of diseases and disorders.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	MT 3.1 Utilize medical terminology to compare and contrast symptoms of diseases and disorders.	Flashcards, competitive strategies, games, quizzing.
Two Skill/Concept	MT 3.2 Utilize medical terminology pertaining to diagnosis and treatment of diseases and disorders in patients/residents.	Flashcards, competitive strategies, games, quizzing, case scenarios.

Notes

Gateway to Certified Nursing Assistant

Career Cluster	Health Science
Course Code	14051
Prerequisite(s)	
Credit	1.0
Graduation Requirement	None
Program of Study and Sequence	Cluster course – **Gateway to Certified Nursing Assistant** – other pathway courses in the Therapeutic Services pathway or capstone experience
Student Organizations	Future Health Professionals (HOSA), Skills USA
Coordinating Work-Based Learning	Mentoring, Job Shadowing, Internship, Workplace Tours,
Industry Certifications	Certified Nursing Assistant
Dual Credit or Dual Enrollment	
Teacher Certification	
Resources	State and National Future Health Professionals (HOSA) Conference (Competitive Events), State and National Skills USA Conference, Certified Nursing Assistant Candidate Handbook, Omnibus Budget Reconciliation Act, South Dakota Board of Nursing, South Dakota Healthcare Association.

Course Description:

Gateway to Certified Nursing Assistant is designed to empower high school students to take charge of and set a course for their future. It will prepare them to graduate with marketable skills and a real-world work connection. Students will be informed of the roles of the Certified Nursing Assistant focusing on direct patient care. After completing this portion for the Certified Nursing Assistant course a student would need only to pass the state examinations in order to become a Certified Nursing Assistant. Clinical hours may be required to meet certification requirements.

Program of Study Application

Gateway to Certified Nursing Assistant is the first pathway course in the Health Science career cluster, Therapeutic Services pathway. The course would follow participation in one or more cluster courses. Completion of Gateway to Certified Nursing Assistant would prepare a student to participate in further pathway courses in the Therapeutic Services pathway or a capstone experience.

Course Standards

CNA 1: Discuss the Certified Nursing Assistant (CNA) certification process and roles of the CNA in the healthcare environment.

Webb Level	*Sub-indicator*	*Integrated Content*
One Recall	CNA 1.1 Discuss laws and regulations that govern the work and certification of the nurse assistants.	Discuss Future Health Professionals, Skills USA, Omnibus Budget Reconciliation Act, South Dakota Board of Nursing, South Dakota Healthcare Association.
One Recall	CNA 1.2 Identify the job duties and requirements of a nurse assistant.	Discuss South Dakota Board of Nursing, South Dakota Healthcare Association. Discuss the Candidate Certified Nursing Assistant Handbook.

Notes

CNA 2: Identify and implement principles related to infection control and basic safety/emergency situations.

Webb Level	*Sub-indicator*	*Integrated Content*
One Recall	CNA 2.1 Identify Certified Nursing Assistant's role in infection control procedures in reference to Centers for Disease Control, Occupational Safety Health Administration, and National Institute of Health.	Hands on skills practice, and return skills demonstration. Compare the relationship between microorganisms and infections including body and defenses.
Two Skill/Concept	CNA 2.2 Discuss and demonstrate safety procedures within the healthcare environment.	Understand Occupational Safety Health Administration (OSHA), Material Safety Data Sheet/Safety Data Sheet.

Notes

CNA 3: Measure and record patient/resident's health-related vital data/statistics.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	CNA 3.1 Collect and document baseline information, including vital signs, height and weight.	Hands on skills, return skills demonstration with height and weight, oxygen saturation, pain rating scale, and vital signs.
Two Skill/Concept	CNA 3.2 Identify normal ranges for vital signs, and list factors which can affect vital signs.	Hands on skills, return skills demonstration. Understand the list factors that can affect them include infection, caffeine, stress, medications, pain.

Notes

CNA 4: Understand patient/resident's environment, basic human needs, and the importance of hygiene.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	CNA 4.1 Identify the importance of basic physical human needs of the patient/resident.	Understand basic knowledge of patient/resident's basic physical human needs such as activities of daily living
Two Skill/Concept	CNA 4.2 Identify the importance of the patient/resident's psychosocial needs.	Understand basic knowledge of patient/resident's psychosocial needs such as Maslow's Hierarchy of Needs, aging process, Department of Social Services, sensitivity to religious and cultural beliefs, empathy, and mental well-being.

Notes

CNA 5: Understand care involving cognitive impairment, mental illness, and death and dying.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	CNA 5.1 Identify effective strategies when caring for cognitively altered and mentally ill patients.	Understanding common mental illness conditions and characteristics such as dementia, Alzheimer's, delirium, and depression.
Two Skill/Concept	CNA 5.2 Understand the basic needs and care during patient/resident's death and grieving process.	Describe death with dignity, summarize physical care of the dying patient, discuss post mortem care, and differentiate between various stages of the grieving process.

Notes

Introduction to Emergency Medical Services

Career Cluster	Health Science
Course Code	
Prerequisite(s)	None
Credit	1
Graduation Requirement	No
Program of Study and Sequence	Cluster course – Gateway to Certified Nursing Assistant – **Introduction to Emergency Medical Services** – other pathway courses in the Therapeutic Services pathway or capstone experience
Student Organization	Future Health Professionals (HOSA), Skills USA
Coordinating Work-Based Learning	Workplace tours, job shadowing, mentoring, service learning, internship
Industry Certifications	First Aid/Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED)/First Aid through American Red Cross or American Heart Association as appropriate
Dual Credit or Dual Enrollment	No
Teacher Certification	Health Science or related occupational training
Resources	American Red Cross: www.redcross.org, American Heart Association www.heart.org

Course Description:

Introduction to Emergency Medical Services is designed to expose students to the various career opportunities in the Emergency Medical Services field. Emergency care services are necessary for the safety of the community. A network of services are coordinated to provide aid and medical assistance from primary response to definitive care, involving personnel trained in the rescue, stabilization, transportation, and advanced treatment of traumatic or medical emergencies. Potential career opportunities may include emergency medical dispatch, first medical responder, ambulance personnel, medium and heavy rescue equipment, and paramedic units. Upon completion of this course, students will be trained in First Aid, Cardio Pulmonary Resuscitation (CPR) and Automatic External Defibrillator (AED).

Program of Study Application

Introduction to Emergency Medical Services is a pathway course in the Health Science career cluster, Therapeutic Services pathway. The course would follow participation in one or more cluster courses and/or Gateway to Certified Nursing Assistant. Introduction to Emergency Medical Services would prepare a student to participate in further pathway courses in the Therapeutic Services pathway or a capstone experience.

Course Standards

EMS 1 Explore roles, responsibilities, and professionalism of Emergency Medical Services (EMS) personnel.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	EMS 1.1 Distinguish differences among careers within EMS and explain in detail the education level, credentialing/licensure requirements.	Examples include: paramedic, Emergency Medical Technician (EMT), firefighter, lifeguard, etc.
Three Strategic Thinking	EMS 1.2 Demonstrate emotional support to patient, bystanders, or other responders.	Integration with other professionals and continuity of care (medical personnel, law enforcement, emergency management, home health care providers, etc.)
Three Strategic Thinking	EMS 1.3 Investigate medical and legal standards in correlation with the Health Insurance Portability & Accountability Act (HIPAA)	Confidentiality, professional ethics
Four Extended Thinking	EMS 1.4 Apply concepts related to professional attitude and appearance	Stress management, self-care, personal pride, positive attitude, reliability, accountability, emotional stability, sensitivity to diverse populations

Notes

EMS 2 Demonstrate skills in first aid, cardiopulmonary resuscitation (CPR) and automated external defibrillation (AED) certification standards set by the American Heart Association or the American Red Cross.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	EMS 2.1 Understand how to perform First Aid for Students and/or CPR for Students and/or how to use an AED.	Prove understanding of First Aid for Students and/or CPR for Students and/or AED certification by completing the course and earning a certification card. Seek out community resources to meet certification requirements.

Notes

EMS 3 Determine the necessity of emergency medical care for a variety of patients with varied medical conditions

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	EMS 3.1 Identify emergency medical treatment protocol	Physical Assessment, oxygen administration, immobilization, vehicle extrication, trauma, environmental injury, emergency childbirth. Possible case study and role play opportunities for practice

Notes

Introduction to Health Informatics

Career Cluster	Health Science
Course Code	
Prerequisite(s)	Recommend taking Medical Terminology first
Credit	1 credit
Graduation Requirement	None
Program of Study and Sequence	Cluster course – **Introduction to Health Informatics** – Human Body Systems or capstone experience
Student Organization	Future Health Professionals (HOSA), SkillsUSA
Coordinating Work-Based Learning	Work-Based Learning
Industry Certifications	None
Dual Credit or Dual Enrollment	None
Teacher Certification	CTE certified with Health Science Endorsement
Resources	American Medical Informatics Association (AMIA) www.amia.org

Course Description:

Health Informatics is a multidisciplinary approach to automated collection, using and sharing of personal and epidemiologic health information. The Health Informatics course will introduce students to the necessary skills and knowledge to work in places such as medical groups, hospitals, clinics, health insurance organizations, research, hardware and software vendors, internet companies, and many others.

Program of Study Application

Introduction to Health Informatics is the first pathway course in the Health Science career cluster, Therapeutic Services pathway. The course would follow participation in one or more cluster courses. Completion of Introduction to Health Informatics would prepare a student to participate in further pathway courses in the Health Informatics pathway or a capstone experience.

Course Standards

HI 1: Communicate health information accurately and within legal and regulatory guidelines, upholding the strictest standards of confidentiality.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	HI 1.1 Apply accuracy, effectiveness and timeliness to the transfer of information.	Employ techniques for effectively communicating health/medical information within legal/regulatory guidelines.
Two Skill/Concept	HI 1.2 Summarize how legal and regulatory requirements apply to the transfer of information.	Employ techniques for effectively communicating health/medical information within legal/regulatory guidelines.
Two Skill/Concept	HI 1.3 Distinguish who in the organization needs information and when they need it.	Employ techniques for effectively communicating health/medical information within legal/regulatory guidelines.
Two Skill/Concept	HI 1.4 Organize recorded information and other documents within the Health Insurance Portability and Accountability Act (HIPAA) protocols to ensure confidentiality and privacy.	Employ techniques for confidentially communicating health/medical information in compliance with legal/regulatory guidelines.
One Recall	HI 1.5 Communicate information ensuring confidentiality of content is maintained.	Employ techniques for confidentially communicating health/medical information in compliance with legal/regulatory guidelines.

Notes

HI 2: Describe the content and diverse uses of health information.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	HI 2.1 Interpret and extract information from medical records and documents.	Employ techniques for effectively documenting, communicating and maintaining health information within legal and regulatory guidelines.
Two Skill/Concept	HI 2.2 Collect appropriate, accurate information including proper codes to record charges for reimbursement.	Employ techniques for effectively documenting, communicating and maintaining health information within legal and regulatory guidelines.
One Recall	HI 2.3 Identify and apply accurate medical terminology.	Employ techniques for effectively documenting, communicating and maintaining health information within legal and regulatory guidelines.
Two Skill/Concept	HI 2.4 Determine the need for requesting further clarification when transcribing/transferring information that may be unclear.	Employ techniques for effectively documenting, communicating and maintaining health information within legal and regulatory guidelines.
Two Skill/Concept	HI 2.5 Assess and apply information for regulatory and legal purposes.	Employ techniques for effectively documenting, communicating and maintaining health information within legal and regulatory guidelines.

Notes

HI 3: Demonstrate the use of systems used to capture, retrieve and maintain confidential health information from internal and external sources.

Webb Level	*Sub-indicator*	*Integrated Content*
Three Strategic Thinking	HI 3.1 Formulate and accurately document required information.	Employ techniques for effectively documenting, communicating and maintaining health information within legal and regulatory guidelines
Two Skill/Concept	HI 3.2 Interpret information that has been collected.	Employ techniques for effectively documenting, communicating and maintaining health information within legal and regulatory guidelines
Three Strategic Thinking	HI 3.3 Differentiate the purposes and audiences for whom information is collected.	Employ techniques for effectively documenting, communicating and maintaining health information within legal and regulatory guidelines
Two Skill/Concept	HI 3.4 Prepare accurate documentation for various audiences within legal and regulatory requirements, as requested.	Employ techniques for effectively documenting, communicating and maintaining health information within legal and regulatory guidelines
One Recall	HI 3.5 Disseminate information to various audiences using systems and guidelines within the facility.	Employ techniques for effectively documenting, communicating and maintaining health information within legal and regulatory guidelines
Two Skill/Concept	HI 3.6 Organize and maintain a records storage system within legal requirements and protocols.	Employ techniques for effectively documenting, communicating and maintaining health information within legal and regulatory guidelines

Notes

Introduction to Medical Diagnostics

Career Cluster	Health Science
Course Code	
Prerequisite(s)	None
Credit	1 credit
Graduation Requirement	None
Program of Study and Sequence	Cluster course – **Introduction to Medical Diagnostics** – Medical Intervention or capstone experience
Student Organization	Future Health Professionals (HOSA) & Skills USA
Coordinating Work-Based Learning	Work-Based Learning: Job Shadowing and Internship
Industry Certifications	None
Dual Credit or Dual Enrollment	None
Teacher Certification	CTE certified with Health Science Endorsement
Resources	Local healthcare facility

Course Description: Diagnostic services creates a picture of the health status of a patient at a single point in time. Introduction to Medical Diagnostics will address tests and evaluations that aid in the detection, diagnosis, and treatment of disease, injury, or other physical conditions.

Program of Study Application

Introduction to Medical Diagnostics is the first pathway course in the Health Science career cluster, Diagnostics pathway. The course would follow participation in one or more cluster courses. Completion of Introduction to Health Informatics would prepare a student to participate in Medical Intervention or a capstone experience.

Course Standards

IMD 1: Investigate Diagnostic Pathway careers.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	IMD 1.1 Compare and contrast scope of practice of diagnostic careers.	For example: Laboratory, Radiology, Optometry, Audiology, and Cardiac Diagnostics Use of South Dakota MyLife website
One Recall	IMD 1.2 Identify educational requirements for specific careers.	
One Recall	IMD 1.3 Identify workforce needs and compensation.	
One Recall	IMD 1.4 Understand licensure, registration, or certification requirements.	American Medical Technologists www.americanmedtech.com American Registry of Radiologic Technologists www.arrt.org

Notes

IMD 2: Acquire the skills necessary to work in any healthcare facility.

Webb Level	*Sub-indicator*	*Integrated Content*
One Recall	IMD 2.1 Define the Health Insurance Portability and Accountability Act (HIPAA) and explain how it provides confidentiality for healthcare information.	Health Insurance Portability and Accountability Act (HIPPA)
Two Skill/Concept	IMD 2.2 Demonstrate infection control standard precautions.	
Two Skill/Concept	IMD 2.3 Apply and demonstrate professional appearance.	As it applies to uniforms, shoes, nails, hair, jewelry, fragrances, and makeup. Identify conflicts of appearance with quality diagnostic services.

Notes

IMD 3: Understand the dynamics of a healthcare diagnostic workplace.

Webb Level	*Sub-indicator*	*Integrated Content*
One Recall	IMD 3.1 Identify workplace equipment, protocol, and procedures.	Work-based learning experiences, virtual tours, interviewing diagnostic healthcare workings, journaling, and reflections.
One Recall	IMD 3.2 Identify professional communication and teamwork.	Work-based learning experiences, virtual tours, interviewing diagnostic healthcare workings, journaling, and reflections
One Recall	IMD 3.3 Identify professional level patient care and interaction.	Work-based learning experiences, virtual tours, interviewing diagnostic healthcare workings, journaling, and reflections

Notes

Introduction to Sports Medicine

Career Cluster	Health Science
Course Code	
Prerequisite(s)	Recommended: Anatomy and Physiology
Credit	1
Graduation Requirement	No
Program of Study and Sequence	Cluster course – Gateway to Certified Nursing Assistant – **Introduction to Sports Medicine** – other pathway courses in the Therapeutic Services pathway or capstone experience
Student Organization	Future Health Professionals (HOSA); Family, Career and Community Leaders of America (FCCLA), or Skills USA
Coordinating Work-Based Learning	Workplace tours, job shadowing, mentoring, internship
Industry Certifications	First Aid/Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED)/First Aid
Dual Credit or Dual Enrollment	No
Teacher Certification	Health Science
Resources	American College of Sports Medicine http://acsm.org/about-acsm; My Fitness Pal www.myfitnesspal.com; Choose MyPlate www.choosemyplate.org , Family, Career and Community Leaders of America (FCCLA) Sports Nutrition STAR event

Course Description:

The Introduction to Sports Medicine Class is designed for students interested in fields such as athletic training, physical therapy, medicine, fitness, exercise physiology, kinesiology, nutrition and other sports medicine related fields. This class includes both classroom work as well as hands-on application in order to provide students with an avenue to explore these fields. Through these connections students will understand the importance that exercise, nutrition, treatment modalities, and rehabilitation play in athletic health. Students will study basic anatomy and the psychological impact of athletic injuries along with assessment and treatment techniques as they apply to athletic injuries.

Program of Study Application

Introduction to Sports Medicine is a pathway course in the Health Science career cluster, Therapeutic Services pathway. The course would follow participation in one or more cluster courses and/or Gateway to Certified Nursing Assistant. Introduction to Sports Medicine would prepare a student to participate in further pathway courses in the Therapeutic Services pathway or a capstone experience.

Course Standards

ISM 1 Identify the fundamental aspects of medical terminology, the human body systems, kinesiology and careers related to sports medicine.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	ISM 1.1 Distinguish differences among careers within sports medicine and explain in detail the education level, credentialing/licensure requirements.	Careers may include: cardiac rehabilitation therapist, certified strength and conditioning coach, personal trainer, lifestyle and weight management coach, athletic trainer, and corporate wellness supervisor/instructor.
Two Skill/Concept	ISM 1.2 Interpret medical terms and abbreviations to communicate information.	Refer to Joint Commission official "Do Not Use List" in terms of using entire word rather than abbreviations during client communication
Level 1: Recall	ISM 1.3 Identify basic structures and functions of human body systems.	Skeletal, muscular, integumentary, cardiovascular, lymphatic, respiratory, nervous, special senses, endocrine, digestive, urinary, and reproductive
Four Extended Thinking	ISM 1.4 Analyze concepts of kinesiology in relation to athletic performance.	How joint and bone movement, body motion, and levers can have positive or negative effects on an athlete's performance and development.

Notes

ISM 2 Understand injury prevention principles and performance enhancement philosophies

Webb Level	*Sub-indicator*	*Integrated Content*
Three Strategic Planning	ISM 2.1 Develop a nutrition and hydration plan for an athlete while implementing personal healthy behaviors.	Example: those training for a variety of intensive sporting event, those with cardiac disease, or those being treated for and/or recovering from illness, etc. Use Choose MyPlate, My Fitness Pal or other nutritional plan management tools.
Two Skill/Concept	ISM 2.2 Describe injury prevention	Student journaling, case studies, Compare and contrast injury classifications, promote behaviors of health and wellness (such as: nutrition, weight control, exercise, sleep habits, and prevention of disease)
Two Skill/Concept	ISM 2.3 Explore and demonstrate safe training practices in sports management	Effects of overtraining on the musculoskeletal system, and relate the importance of adopting safe biomechanical practices when training.
Four Extended Thinking	ISM 2.4 Compare and contrast performance enhancement philosophies	General conditioning principles, role of the cardiovascular/respiratory systems and strength training have on fitness/athletic performance, the effects of the environment on training, the importance of flexibility in fitness

Notes

ISM 3 Explore and understand common sports injuries, injury management and treatment techniques.

Webb Level	*Sub-indicator*	*Integrated Content*
Three Strategic Thinking	ISM 3.1 Recognize and explain common injuries and conditions that impact athletic performance.	Explain an injury assessment. Identify soft tissue injuries and skin conditions. Recognize abdominal injuries, bleeding, and shock. Discuss immobilization techniques. Describe treatment for medical conditions such as seizures, fainting, asthma etc., as well as heat illness and cold exposure
Three Strategic Thinking	ISM 3.2 Assess common sports injuries to determine treatment modalities	Identify the purpose and how to properly select the correct therapeutic modality. Describe the physiological effects, indications, contraindications, and application of: cryotherapy, thermotherapy, electrotherapy, and massage.
Four Extended Thinking	ISM 3.3 Perform proper treatment techniques of common sports injuries through hands-on application	Utilize various experiences such as role playing, virtual learning, videos or case studies. Field experience would be highly recommended.

Notes

ISM 4 Explore the psychological impact of injury and the healing process on an individual.

Webb Level	*Sub-indicator*	*Integrated Content*
Level 1: Recall	ISM 4.1 Describe principles of sports psychology.	Identify the psychological implications of an injury to an athlete. Examine potential psychological problems associated with overtraining, including staleness and burnout.
Three Strategic Thinking	ISM 4.2 Explain possible adaptations that can be made to exercise programs to account for different clients' needs.	Given a scenario or profile of a client/patient, develop an exercise program with the following adaptations: immediate effects of exercise, long term effects of exercise (heart/lungs/weight control/disease prevention), effects of acclimatization (such as changes in temperature, altitude, climate, etc.), effects of travel on the client and/or athlete and medications. Modification of the exercise program for post injury for athletes returning to their sport.

Notes

Pharmacy Technician

Career Cluster	Health Science
Course Code	14152
Prerequisite(s)	Currently enrolled in 12th grade
Credit	1 credit
Graduation Requirement	None
Program of Study and Sequence	Cluster course – Gateway to Certified Nursing Assistant – **Pharmacy Technician** – other pathway courses in the Therapeutic Services pathway or capstone experience
Student Organization	Future Health Professionals (HOSA) & Skills USA
Coordinating Work-Based Learning	Work-Based Learning: Job Shadowing and Internship
Industry Certifications	Certified Pharmacy Technician (CPhT)
Dual Credit or Dual Enrollment	Enroll at Southeast Technical Institute (STI)/2 credits articulated of the Pharmacy Principles and Practice I at STI
Teacher Certification	CTE certified with Health Science Endorsement
Resources	South Dakota Board of Pharmacy and local pharmacist.

Course Description:

The Pharmacy Technician course prepares students to assist pharmacists. This includes learning about the roles and responsibilities of the Pharmacy Technician, safety measures, drug dosage calculations, and identification of various drugs and their effects on the human body. Students will also learn how to perform a wide range of duties in retail, hospital, and home care. The Pharmacy Technician course will equip the student to pass the national certification exam.

Program of Study Application

Pharmacy Technician is a pathway course in the Health Science career cluster, Therapeutic Services pathway. The course would follow participation in one or more cluster courses and/or Gateway to Certified Nursing Assistant. Participation in Pharmacy Technician would prepare a student to participate in further pathway courses in the Therapeutic Services pathway or a capstone experience.

Course Standards

PhT 1: Understand the roles and responsibilities of the Pharmacy Technician and governing laws.

Webb Level	*Sub-indicator*	*Integrated Content*
One Recall	PhT 1.1 Understand the roles and responsibilities of a pharmacy technician.	
Two Skill/Concept	PhT 1.2 Interpret the laws and regulations involved in dispensing medication including controlled substances.	
Two Skill/Concept	PhT 1.3 Apply the requirements for dispensing medication in accordance with Federal and South Dakota law.	Pharmacy Technician Certification Board (PTCB) www.ptcb.org; South Dakota Board of Pharmacy
One Recall	PhT 1.4 List the various types of reimbursement for prescription coverage.	Examples could include: Medicare/Medicaid/Private insurance

Notes

PhT 2: Understand safety measures as they pertain to preparing prescriptions and maintaining inventory.

Webb Level	*Sub-indicator*	*Integrated Content*
One Recall	PhT 2.1 Identify the steps involved in preparing and processing prescriptions.	
Two Skill/Concept	PhT 2.2 Apply safety measures to prevent prescription errors and recognize the importance of reporting errors.	
One Recall	PhT 2.3 Identify the process of maintaining pharmacy inventory.	Examples: receiving merchandise, stocking shelves, proper temperatures, and outdated pharmacy merchandise.

Notes

PhT 3: Understand drug dosage calculations and preparation of prescriptions.

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	PhT 3.1 Solve Basic Math Problems.	Convert Roman numerals, fractions, add, subtract, multiply, and divide decimals, use ratios and proportions.
Two Skill/Concept	PhT 3.2 Convert between metric and apothecary measurements.	
One Recall	PhT 3.3 Calculate dosage.	
One Recall	PhT 3.4 Identify characteristics of dosage forms.	Oral, liquids, topical, parenteral, aerosols, and mists.
One Recall	PhT 3.5 Identify common terminology and abbreviations related to pharmacy.	

Notes

PhT 4 Identify various drugs and their effects on the human body.

Webb Level	*Sub-indicator*	*Integrated Content*
One Recall	PhT 4.1 Define therapeutic effects of medications.	
One Recall	PhT 4.2 Memorize common medications by brand and generic names.	
One Recall	PhT 4.3 Identify the most common adverse effects of drugs.	
One Recall	PhT 4.4 Identify common drug interactions of drugs.	
One Recall	PhT 4.5 Identify monitoring parameters or labs for drug therapy.	Relates to directives from pharmacists and attending physicians.

Notes