

# **North Dakota Health Sciences Education**

## **Content Standards**

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**North Dakota Department of Career and Technical Education**

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**Adapted from:**

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**This set of standards was approved and edited with the inclusion of all current Health Science teachers in the state over a period of three months, through a cooperative online process and with meetings during professional development.**

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# **Career and Technical Education Standards Introduction**

## **Mission**

The mission of the State Board for Career and Technical Education (CTE) is to work with others to provide all North Dakota citizens with the technical skills, knowledge, and attitudes necessary for successful performance in a globally competitive workplace.

## **Vision**

The State Board for Career and Technical Education (CTE) is committed to providing career awareness, work readiness skills, occupational preparation, and retraining of workers throughout the state. Career and technical education will span all educational levels, providing youth with exploration opportunities and the foundation skills needed to enter the world of work while providing adults with skills needed to enter, re-enter, or advance in the workforce.

## **Goal**

North Dakota Career and Technical Education's goal is to create a competitive and knowledgeable work force. This is accomplished through a variety of educational program areas that are organized to prepare students for careers in their chosen fields, to take leadership roles, and balance their multiple roles in life. CTE programs prepare students with the knowledge and skills to make informed career choices, to integrate and apply academic concepts, to prepare for successful participation in a global society, and to engage in lifelong learning.

## **Standards Development Process**

Standards development is a multi-phase process. Existing and/or industry standards are the basis for the North Dakota Program Standards. A team of expert secondary and postsecondary teachers, business and industry representatives, and the state program supervisor draft the standards document. Once the document is finalized, the State Board for Career and Technical Education approves and adopts the standards.

Course Frameworks are also developed by the writing team. A framework includes a brief overview of the course content, topical units of study, and identifies the standards recommended for inclusion within the course. The frameworks are tailored to prepare young people for the opportunities in North Dakota. School Districts will use the frameworks as a guide for developing curriculum that reflects local needs.

## **Key Principles of Career and Technical Education**

### **We believe that Career Technical Education:**

**1. Draws its curricula, standards, and organizing principles from the workplace.**

The workplace provides the context, objectives, and organizing constructs for instruction and assessment. The workplace also defines the standards of performance necessary, including those required for academic, technical, and employability skills.

**2. Is a critical and integral component of the total educational system, offering career-oriented benefits for all students.**

CTE classes offer educational benefits to students pursuing careers requiring specific technical skills as well as providing a strong foundation for those pursuing a traditional four-year (or more) degree.

**3. Is a critical and integral component of the workforce development system, providing the essential foundation for a thriving economy.**

Preparation of a well-prepared, qualified workforce requires solid academics, good work ethics, and specific technical skills as well as the ability to communicate, work with others, solve problems, and use information. CTE contributes directly to this preparation by providing a curriculum tied to specific workplace requirements.

**4. Maintains high levels of excellence supported through identification of academic and workplace standards, measurement of performance (accountability), and high expectations for participant success.**

Career Technical Education is committed to continuous improvement, attention to industry certification, and the development of highly qualified teachers.

**5. Is robust and flexible enough to respond to the needs of the multiple educational environments, customers, and levels of specialization.**

CTE involves a large and complex delivery system that (1) integrates career exploration, (2) provides effective tools for organizing all curricula, (3) facilitates the teaching and use of technology, (4) is integrated into the total learning experience, (5) enhances the learning of academic subjects, (6) teaches broad occupational skills, (7) includes all aspects of the industry, (8) teaches how to balance family and work responsibilities, (9) provides job-specific training, (10) is offered at multiple levels of the educational continuum, and (11) is delivered through a variety of educational environments.

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<b>Standard 1</b>	<b><i>HEALTH SCIENCE ACADEMIC FOUNDATION</i></b> <i>-Understand human anatomy, physiology, common diseases and disorders, and medical math principles.</i>	
<b>Topic 1.1</b>	<b>Human Anatomy and Physiology</b>	
	<b>Student Competencies</b>	
	1.1.1	Identify basic levels of organization of the human body. <ol style="list-style-type: none"> <li>Chemical</li> <li>Cellular</li> <li>Tissue</li> <li>Organs</li> <li>Systems</li> <li>Organism</li> </ol>
	1.1.2	Identify body planes, directional terms, cavities, and quadrants. <ol style="list-style-type: none"> <li>Body planes (sagittal, mid-sagittal, coronal/frontal, transverse/horizontal)</li> <li>Directional terms (superior/inferior, anterior/posterior, ventral/dorsal, medial/lateral, proximal/distal, superficial/deep, cephalic/caudal)</li> <li>Cavities (dorsal, cranial, spinal, thoracic, abdominal, and pelvic, orbital, nasal, oral)</li> <li>Quadrants (right upper, right lower, left upper, and left lower)</li> </ol>
	1.1.3	Analyze basic structures and functions of human body systems (skeletal, muscular, integumentary, cardiovascular, lymphatic, respiratory, nervous, special senses, endocrine, digestive, urinary, and reproductive). <ol style="list-style-type: none"> <li>Skeletal (bone anatomy, axial and appendicular skeletal bones, functions of bones, ligaments, types of joints)</li> <li>Muscular (microscopic anatomy of muscle tissue, types of muscle, locations of skeletal muscles, functions of muscles, tendons, directional movements)</li> <li>Integumentary (layers, structures and functions of skin)</li> <li>Cardiovascular (components of blood, structures and functions of blood components, structures and functions of the cardiovascular system, conduction system of the heart, cardiac cycle)</li> <li>Lymphatic (structures and functions of lymphatic system, movement of lymph fluid)</li> <li>Respiratory (structures and functions of respiratory system, physiology of respiration)</li> <li>Nervous (structures and functions of nervous tissue and system, organization of nervous system, CNS/PNS, sympathetic/parasympathetic)</li> <li>Special senses (structures and functions of eye, ear, nose and tongue; identify senses for sight, hearing, smell, taste, touch)</li> <li>Endocrine (endocrine versus exocrine, structures and functions of endocrine system, hormones, regulation of hormones)</li> </ol>

		<ul style="list-style-type: none"> <li>j. Digestive (structures and functions of gastrointestinal tract, chemical and mechanical digestion, structures and functions of accessory organs)</li> <li>k. Urinary (structures and functions of urinary system, gross and microscopic anatomy, process of urine formation, urine composition, homeostatic balance)</li> <li>l. Reproductive (structures and functions of male and female reproductive systems, formation of gametes, hormone production and effects, menstrual cycle, and conception)</li> </ul>
<b>Topic 1.2</b>	<b>Diseases and Disorders</b>	
	<b>Student Competencies</b>	
	1.2.1	<p>Describe common diseases and disorders of each body system (such as: cancer, diabetes, dementia, stroke/CVA, heart disease, tuberculosis, hepatitis, COPD, kidney disease, arthritis, ulcers, asthma, cataracts, concussion/traumatic brain injury, cystic fibrosis, depression, anxiety, bipolar disorder).</p> <ul style="list-style-type: none"> <li>a. Etiology</li> <li>b. Pathology</li> <li>c. Diagnosis</li> <li>d. Treatment</li> <li>e. Prevention</li> </ul>
	1.2.2	Discuss research related to emerging diseases and disorders (such as: autism, VRSA, PTSD, Listeria, seasonal flu).
	1.2.3	<p>Describe biomedical therapies as they relate to the prevention, pathology, and treatment of disease.</p> <ul style="list-style-type: none"> <li>a. Gene editing</li> <li>b. Gene testing</li> <li>c. Gene therapy</li> <li>d. Immunotherapy</li> <li>e. Immunizations</li> <li>f. Stem cell research</li> </ul>
<b>Topic 1.3</b>	<b>Medical Mathematics</b>	
	<b>Student Competencies</b>	
	1.3.1	<p>Demonstrate competency in basic math skills and mathematical conversions as they relate to healthcare.</p> <ul style="list-style-type: none"> <li>a. Metric system (such as: centi, milli, kilo, deci, micro)</li> <li>b. Mathematical (average, ratios, fractions, percentages, addition, subtraction, multiplication, division)</li> <li>c. Conversions (height, weight/mass, length, volume, temperature, household measurements)</li> </ul>
	1.3.2	Demonstrate the ability to analyze diagrams, charts, graphs, and tables to interpret healthcare results.
	1.3.3	Demonstrate use of the 24-hour clock/military time.



<b>Standard 2</b>	<b>COMMUNICATION</b> <i>-Demonstrate methods of delivering and obtaining information, while communicating effectively.</i>	
<b>Topic 2.1</b>	<b>Concepts of Effective Communication</b>	
	<b>Student Competencies</b>	
	2.1.1	Model verbal and nonverbal communication.
	2.1.2	Identify common barriers to communication. <ul style="list-style-type: none"> <li>a. Physical disabilities (aphasia, hearing loss, impaired vision)</li> <li>b. Psychological barriers (attitudes, bias, prejudice, stereotyping)</li> <li>c. Language barriers</li> </ul>
	2.1.3	Identify the differences between subjective and objective information.
	2.1.4	Interpret elements of the communication process using basic sender-receiver-message-feedback model.
	2.1.5	Practice speaking and active listening skills.
	2.1.6	Modify communication to meet the needs of the patient/client and be appropriate to the situation.
<b>Topic 2.2</b>	<b>Medical Terminology</b>	
	<b>Student Competencies</b>	
	2.2.1	Use common roots, prefixes, and suffixes to communicate information.
	2.2.2	Interpret medical abbreviations to communicate information. <ul style="list-style-type: none"> <li>a. Common abbreviations</li> <li>b. Joint Commission official “Do Not Use List”</li> </ul>
<b>Topic 2.3</b>	<b>Written Communication Skills</b>	
	<b>Student Competencies</b>	
	2.3.1	Utilize proper elements of written and electronic communication (spelling, grammar, and formatting).
	2.3.2	Prepare examples of technical, informative, and creative writing.

<b>Standard 3</b>	<b><i>SYSTEMS</i></b> <i>-Identify how key systems affect services performed and quality of care.</i>	
<b>Topic 3.1</b>	<b>Healthcare Delivery Systems</b> <b>Student Competencies</b>	
	3.1.1	Compare healthcare delivery systems. <ul style="list-style-type: none"> <li>a. Non-profit and for profit (such as: acute care, ambulatory facilities, long-term care facilities, home health, medical and dental offices, mental health services)</li> <li>b. Government (such as: CDC, CMS, NIH, FDA, OSHA, Public Health systems/Health Departments, Veteran's Administration)</li> <li>c. Non-profit (such as: American Cancer Society, American Red Cross, WHO, March of Dimes, American Heart Association)</li> </ul>
	3.1.2	Describe the responsibilities of consumers within the healthcare system (such as: self-advocacy, patient compliance, provider and consumer obligations, Patient's Bill of Rights).
	3.1.3	Assess the impact of emerging issues on healthcare delivery systems (such as: technology, epidemiology, bioethics, socioeconomics, behavior/mental health).
	3.1.4	Discuss healthcare economics and common methods of payment for healthcare. <ul style="list-style-type: none"> <li>a. Private health insurance (such as: Blue Cross, Affordable Care Act - ACA)</li> <li>b. Managed care (such as: HMOs, PPOs, IPAs, medical home)</li> <li>c. Government programs (Medicare, Medicaid, Tricare, and Workers' Compensation)</li> </ul>
	3.1.5	Identify fundamental terms related to health insurance (such as: Claim, Coinsurance, Co-payment, Explanation of Benefits (EOB), Fraud, HIPAA, Medical Coding , Premium)

<b>Standard 4</b>	<b><i>EMPLOYABILITY SKILLS</i></b> <i>-Utilize employability skills to enhance employment opportunities and job satisfaction.</i>	
<b>Topic 4.1</b>	<b>Personal Traits of the Health Professional</b>	
	<b>Student Competencies</b>	
	4.1.1	Identify personal traits and attitudes desirable in a member of the career ready healthcare team. <ul style="list-style-type: none"> <li>a. Acceptance of criticism</li> <li>b. Competence</li> <li>c. Dependability</li> <li>d. Discretion</li> <li>e. Empathy</li> <li>f. Enthusiasm</li> <li>g. Honesty</li> <li>h. Initiative</li> <li>i. Patience</li> <li>j. Responsibility</li> <li>k. Self-motivation</li> <li>l. Social and cultural competence</li> <li>m. Tact</li> <li>n. Team player</li> <li>o. Willingness to learn</li> </ul>
	4.1.2	Summarize professional standards as they apply to hygiene, dress, language, confidentiality and behavior.
<b>Topic 4.2</b>	<b>Employability Skills</b>	
	<b>Student Competencies</b>	
	4.2.1	Apply employability skills in healthcare. <ul style="list-style-type: none"> <li>a. Chain of command</li> <li>b. Correct grammar</li> <li>c. Decision making</li> <li>d. Flexible</li> <li>e. Initiative</li> <li>f. Integrity</li> <li>g. Loyalty</li> <li>h. Positive attitude</li> <li>i. Professional characteristics</li> <li>j. Prompt and prepared</li> </ul>

		<ul style="list-style-type: none"> <li>k. Responsibility</li> <li>l. Scope of practice</li> <li>m. Teamwork</li> <li>n. Willing to learn</li> </ul>
<b>Topic 4.3</b>	<b>Career Decision-making</b>	
	<b>Student Competencies</b>	
	4.3.1	Research levels of education, credentialing requirements, and employment trends in health professions.
	4.3.2	Distinguish differences among careers within health science pathways (diagnostic services, therapeutic services, health informatics, support services, or biotechnology research and development).
<b>Topic 4.4</b>	<b>Employability Preparation</b>	
	<b>Student Competencies</b>	
	4.4.1	Develop components of a personal portfolio. <ul style="list-style-type: none"> <li>a. Letter of introduction</li> <li>b. Resume</li> <li>c. Sample Projects</li> <li>d. Writing Sample</li> <li>e. Work-based Learning Documentation</li> <li>f. Oral Report</li> <li>g. Service Learning/Community Service</li> <li>h. Credentials</li> <li>i. Technology Skills</li> <li>j. Leadership Examples</li> </ul>
	4.4.2	Identify strategies for pursuing employment (social media, personal networking, job sites, internships).

<b>Standard 5</b>	<b><i>LEGAL RESPONSIBILITIES</i></b> <i>-Describe legal responsibilities, limitations, and implications on healthcare worker actions.</i>	
<b>Topic 5.1</b>	<b>Legal Responsibilities and Implications</b>	
	<b>Student Competencies</b>	
	5.1.1	Analyze legal responsibilities and implications of criminal and civil law. <ul style="list-style-type: none"> <li>a. Abuse</li> <li>b. Assault</li> <li>c. Battery</li> <li>d. Harassment</li> <li>e. Invasion of privacy</li> <li>f. Libel</li> <li>g. Malpractice</li> <li>h. Negligence</li> <li>i. Slander</li> <li>j. Tort</li> </ul>
<b>Topic 5.2</b>	<b>Legal Practices</b>	
	<b>Student Competencies</b>	
	5.2.1	Apply standards for the safety, privacy and confidentiality of health information (HIPAA, privileged communication).
	5.2.2	Describe advance directives.
	5.2.3	Summarize the essential characteristics of a patient's basic rights within a healthcare setting.
	5.2.4	Differentiate informed and implied consent.
	5.2.5	Explain laws governing harassment and scope of practice.
	5.2.6	Describe the concept of scope of practice.
	5.2.7	Interpret procedures for reporting activities and behaviors that affect the health, safety, and welfare of others (incident report).

<b>Standard 6</b>	<b><i>ETHICS</i></b> <i>-Understand accepted ethical practices with respect to cultural, social, and ethnic differences within the healthcare environment.</i>	
<b>Topic 6.1</b>	<b>Ethical Practice</b>	
	<b>Student Competencies</b>	
	6.1.1	Differentiate between ethical and legal issues impacting healthcare.
	6.1.2	Identify ethical issues and their implications related to healthcare (such as: organ donation, <i>in vitro</i> fertilization, euthanasia, scope of practice, ethics committee, gene editing).
	6.1.3	Utilize procedures for reporting activities and behaviors that affect the health, safety, and welfare of others (such as: incident report).
<b>Topic 6.2</b>	<b>Cultural, Social, and Ethnic Diversity</b>	
	<b>Student Competencies</b>	
	6.2.1	Discuss religious, social, and cultural values as they impact healthcare (such as: ageism, ethnicity, race, religion, gender).
	6.2.2	Demonstrate respectful and empathetic treatment of ALL patients/clients (such as: customer service, patient satisfaction, civility).

<b>Standard 7</b>	<b><i>SAFETY PRACTICES</i></b> <i>-Identify existing and potential hazards to clients, co-workers, and self. Employ safe work practices and follow health and safety policies and procedures to prevent injury and illness.</i>	
<b>Topic 7.1</b>	<b>Infection Control</b>	
	<b>Student Competencies</b>	
	7.1.1	Explain principles of infection control. <ul style="list-style-type: none"> <li>a. Chain of infection</li> <li>b. Mode of transmission (direct, indirect, vectors, common vehicle [air, food, water], healthcare-associated infections [nosocomial], opportunistic)</li> <li>c. Microorganisms (non-pathogenic, pathogenic, aerobic, anaerobic)</li> <li>d. Classifications (bacteria, protozoa, fungi, viruses, parasites)</li> </ul>
	7.1.2	Differentiate methods of controlling the spread and growth of microorganisms. <ul style="list-style-type: none"> <li>a. Aseptic control (antisepsis, disinfection, sterilization, sterile technique)</li> <li>b. Standard precautions</li> <li>c. Isolation precautions</li> <li>d. Blood borne pathogen precautions</li> <li>e. Vaccinations</li> </ul>
<b>Topic 7.2</b>	<b>Personal Safety</b>	
	<b>Student Competencies</b>	
	7.2.1	Apply personal safety procedures based on Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations.
	7.2.2	Demonstrate principles of body mechanics.
<b>Topic 7.3</b>	<b>Environmental Safety</b>	
	<b>Student Competencies</b>	
	7.3.1	Apply safety techniques in the work environment. <ul style="list-style-type: none"> <li>a. Ergonomics</li> <li>b. Safe operation of equipment</li> <li>c. Patient/client safety measures (check area for safety)</li> </ul>
<b>Topic 7.4</b>	<b>Common Safety Hazards</b>	
	<b>Student Competencies</b>	
	7.4.1	Observe all safety standards related to the Occupational Exposure to Hazardous Chemicals Standard (Safety Data Sheets (SDSs)). ( <a href="http://www.osha.gov">www.osha.gov</a> )
	7.4.2	Comply with safety signs, symbols, and labels.

<b>Topic 7.5</b>	<b>Emergency Procedures and Protocols</b>	
	<b>Student Competencies</b>	
	7.5.1	Practice fire safety in a healthcare setting.
	7.5.2	Apply principles of basic emergency response in natural disasters and other emergencies (safe location, contact emergency personnel, follow facility protocols).

<b>Standard 8</b>	<b><i>TEAMWORK</i></b> <i>-Identify roles and responsibilities of individual members as part of the healthcare team.</i>	
<b>Topic 8.1</b>	<b>Healthcare Teams</b>	
	<b>Student Competencies</b>	
	8.1.1	Evaluate roles and responsibilities of team members. <ul style="list-style-type: none"> <li>a. Examples of healthcare teams</li> <li>b. Responsibilities of team members</li> <li>c. Benefits of teamwork</li> </ul>
	8.1.2	Identify characteristics of effective teams. <ul style="list-style-type: none"> <li>a. Active participation</li> <li>b. Commitment</li> <li>c. Common goals</li> <li>d. Cultural sensitivity</li> <li>e. Flexibility</li> <li>f. Open to feedback</li> <li>g. Positive attitude</li> <li>h. Reliability</li> <li>i. Trust</li> <li>j. Value individual contributions</li> </ul>
<b>Topic 8.2</b>	<b>Team Member Participation</b>	
	<b>Student Competencies</b>	
	8.2.1	Recognize methods for building positive team relationships (such as: mentorships and teambuilding).
	8.2.2	Analyze attributes and attitudes of an effective leader. <ul style="list-style-type: none"> <li>a. Characteristics (interpersonal skills, focused on results, positive)</li> <li>b. Types (autocratic, democratic, laissez faire)</li> <li>c. Roles (sets vision, leads change, manages accountability)</li> </ul>
	8.2.3	Apply effective techniques for managing team conflict (negotiation, assertive communication, gather the facts, clear expectations, mediation).



<b>Standard 9</b>	<b><i>HEALTH MAINTENANCE PRACTICES</i></b> <i>-Differentiate between wellness and disease. Promote disease prevention and model healthy behaviors.</i>	
<b>Topic 9.1</b>	<b>Healthy Behaviors</b>	
	<b>Student Competencies</b>	
	9.1.1	Promote self-care behaviors of health and wellness (such as: nutrition, weight control, exercise, sleep habits).
	9.1.2	Describe public health strategies for prevention of disease. <ul style="list-style-type: none"> <li>a. Routine physical exams</li> <li>b. Medical, dental, and mental health screenings</li> <li>c. Community health education outreach programs</li> <li>d. Immunizations</li> <li>e. Stress management</li> <li>f. Avoid risky behaviors</li> </ul>
	9.1.3	Investigate complementary and alternative health practices as they relate to wellness and disease prevention (such as: Eastern medicine, holistic medicine, homeopathy, manipulative and natural therapies).
	9.1.4	Discuss physical, mental, social, and behavioral development and its impact on healthcare, while identifying socioeconomic determinants of health and wellness.

<b>Standard 10</b>	<b><i>TECHNICAL SKILLS</i></b> <i>-Apply technical skills required for all career specialties and demonstrate skills and knowledge as appropriate.</i>	
<b>Topic 10.1</b>	<b>Technical Skills</b>	
	<b>Student Competencies</b>	
	10.1.1	Apply procedures for measuring and recording vital signs including the normal ranges (such as: height/weight, temperature, pulse, respirations, blood pressure, pain).
	10.1.2	Obtain training or certification in cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.

<b>Standard 11</b>	<b><i>INFORMATION TECHNOLOGY APPLICATIONS</i></b> <i>-Utilize and understand information technology applications common across health professions.</i>	
<b>Topic 11.1</b>	<b>Key Principles of Health Information Systems</b>	
	<b>Student Competencies</b>	
	11.1.1	Identify types of data collected in Electronic Health Records/Electronic Medical Records (EHR or EMR) (such as: history and physical, medications, diagnostic tests, patient demographics).
	11.1.2	Explore different types of health record data collection tools (such as: patient monitoring equipment, telemedicine, phone apps, and medical wearable devices).
	11.1.3	Identify the types and content of an EHR/EMR (such as: pharmacy, laboratory, radiology).
	11.1.4	Create documentation in EHR/EMRs that reflect timeliness, completeness, and accuracy.
	11.1.5	Adhere to information systems policies, procedures, and regulations as required by national, state, and local entities.
<b>Topic 11.2</b>	<b>Privacy and Confidentiality of Health Information</b>	
	<b>Student Competencies</b>	
	11.2.1	Apply fundamentals of privacy and confidentiality policies and procedures (HIPAA).
	11.2.2	Identify legal and regulatory requirements related to the use of personal health information (such as: Health Information Technology Act—HITECH Act, American Recovery and Reinvestment Act—ARRA).
	11.2.3	Identify common policies and procedures for proper access, disclosure and protection of personal health information (such as: passwords, administrative safeguards, database security).
	11.2.4	Describe consequences of inappropriate use of health data in terms of disciplinary action.
	11.2.5	Understand the principle to correct inaccurate information/errors entered into an EHR/EMR (such as: adding, clarifying, and correcting information).
<b>Topic 11.3</b>	<b>Basic Computer Skills</b>	
	<b>Student Competencies</b>	
	11.3.1	Apply basic computer concepts and terminology necessary to use computers and other mobile devices.
	11.3.2	Demonstrate basic computer troubleshooting procedures (such as: restart, check power supply, refresh browser, check settings).
	11.3.3	Demonstrate use of file organization and information storage.
	11.3.4	Identify uses of basic word processing, spreadsheet, and database applications.
	11.3.5	Evaluate validity of web-based resources.
	11.3.6	Demonstrate appropriate usage of email and social media in a work environment (such as: work-related communications, personal texting on own time, appropriate language and content, use full language sentences).

## Career Ready Practices

### **1. Act as a Responsible and Contributing Citizen and Employee**

Career-ready individuals understand the obligations and responsibilities of being a member of a community and demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them, think about the near-term and long-term consequences of their actions, and seek to act in ways that contribute to the betterment of their teams, families, community, and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.

### **2. Apply Appropriate Academic and Technical Skills**

Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications and make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.

### **3. Attend to Personal Health and Financial Well-Being**

Career-ready individuals understand the relationship between personal health, workplace performance, and personal well-being; they act on that understanding to regularly practice health diet, exercise and mental health activities. Career-ready individuals also take regular action to contribute to their personal financial well-being, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.

### **4. Communicate Clearly, Effectively, and with Reason**

Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice and organization and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.

### **5. Consider the environmental, social, and economic impacts of decisions**

Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organizations and the environment. They are aware of and utilize new technologies, understandings, procedures, materials and regulations affecting the nature of their work as it relates to the impact on the social condition, the environment and profitability of the organization.

### **6. Demonstrate creativity and innovation**

Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization. They can consider unconventional ideas and suggestions as solutions to issues, tasks or problems, and they discern which ideas and suggestions will add greatest value. They seek new methods, practices and ideas from a variety of sources and seek to apply those ideas to their own workplace. They take action on their ideas and understand how to bring innovation to an organization.

**7. Employ valid and reliable research strategies**

Career-ready individuals are discerning in accepting and using new information to make decisions, change practices, or inform strategies. They use a reliable research process to search for new information and evaluate the validity of sources when considering the use and adoption of external information or practices. They use an informed process to test new ideas, information, and practices in their workplace situation.

**8. Utilize critical thinking to make sense of problems and persevere in solving them**

Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur, quickly take action to address the problem, thoughtfully investigate the root cause of the problem prior to introducing solutions, and carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.

**9. Model integrity, ethical leadership, and effective management**

Career-ready individuals consistently act in ways that align to personal and community-held ideals and principles while employing strategies to positively influence others in the workplace. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the direction and actions of a team or organization, and they apply insights into human behavior to change others' actions, attitudes, and/or beliefs. They recognize the near-term and long-term effects that management's actions and attitudes can have on productivity, morale, and organizational culture.

**10. Plan education and career path aligned to personal goals**

Career-ready individuals take personal ownership of their own educational and career goals, and they regularly act on a plan to attain these goals. They understand their own career interests, preferences, goals, and requirements. They have perspective regarding the pathways available to them and the time, effort, experience, and other requirements to pursue each, including a path of entrepreneurship. They recognize the value of each step in the educational and experiential process, and they recognize that nearly all career paths require ongoing education and experience. They seek counselors, mentors, and other experts to assist in the planning and execution of career and personal goals.

**11. Use technology to enhance productivity**

Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring and using new technology, being proficient with ubiquitous technology applications. They understand the inherent risks, personal and organizational, of technology applications, and they take actions to prevent or mitigate these risks.

**12. Work productively in teams while using cultural/global competence**

Career-ready individuals positively contribute to every team whether formal or informal. They apply an awareness of cultural differences to avoid barriers to productive and positive interaction. They find ways to increase the engagement and contribution of all team members. They plan and facilitate effective team meetings.