



National Health Science Standards (May 2015)

NCHSE-2015

This document provides the correlation between HealthCenter21 interactive e-learning curriculum, and the National Health Science Standards (May 2015) standards.



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HealthCenter21 Template

All National Health Science Standards (May 2015) NCHSE-2015

Anatomy and Physiology

Explore
Introduction to Anatomy and Physiology
Integumentary System
Skeletal System
Muscular System
Nervous System
Sensory System
Cardiovascular System
Lymphatic System
Respiratory System
Digestive System
Urinary System
Endocrine System
Reproductive System
Reflection Questions and Discussion
Informative Brochure
Body Function Worksheet
Current Event

Medical Terminology

Word Search Puzzle
Word Parts: Roots
Word Parts: Suffixes and Prefixes
Abbreviations
Anatomic References
Reflection Questions and Discussion
Worksheet & Crossword Puzzle
Current Event

Medical Mathematics

Basic Math Review Worksheet
Number Basics
Key Calculations
Measurement Systems
Medications
Temperature and Time
Charts and Graphs
Reflection Questions and Discussion
Review Worksheet
Current Event

Communications

Communications Game
Basic Communication
Interpersonal Communication
Communication Barriers
Communicating with Patients
Documentation
Communication Technology
Reflection Questions and Discussion
Communication Skits
Culture/Religion Presentation
Taking Phone Messages
Communication Diversity Skit
Current Event

Health Care Systems

Analyze Health Care Facilities
History of Health Care
Systems in Health Care
Health Care Delivery Systems
Health Insurance
Reflection Questions and Discussion
Write a Goal Using System Theory
Talk Show
Health Care Innovations Debate
Comparison Infograph
Payment Methods
Current Event

Legal and Ethical Responsibilities

Confidentiality Role Play
Civil and Criminal Law
Privacy and Security
Advance Directives and Client Rights
Liability and Ethics
Workplace Law
Reflection Questions and Discussion
Advanced Directives (Create a Living Will)
Ethics Debate
Code of Ethics
Scope of Practice
Current Event



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Personal Qualities

Work Attire
Personal Characteristics
Health Care Team
Personal Management Skills
Reflection Questions and Discussion
Health Care Problem Solving Scenarios
Team Invention
Conflict Resolution Scenarios
Health Care Team Meeting
Current Event

The Health Assistant

Verbal and Nonverbal Communication
Health Assisting
Nursing
Qualities of Health Assistants
Infection Control and Safety Precautions
Legal Conduct
Patient Rights and Code of Ethics
Communication Exercise
Reflection Questions and Discussion
Job Search
Self-Portrait
Current Event

Health Care Careers

Research Jobs Wanted Ads
Careers in Health Care
Choosing a Career in Health Care
Reflection Questions and Discussion
Career Research & Presentation
Career Profiles
Health Care Careers History
Professional Traits
Current Event

Job Seeking Skills

Job Interview Role Playing
Job Seeking Scenario and Discussion
Applications and Resumes
Interviews and Resignations
Questions and Discussion
Job Interview Practice
Current Event

Health Information Technology

Health Information Technology Overview
Electronic Health Records
Health Insurance Portability and Accountability Act (HIPAA)
Current Event

Infection Control

Hand Washing
Introduction to Infection Control
Standard Precautions
Transmission-Based Precautions
Sterile Technique
Reflection Questions and Discussion
Hand Washing
Observing Microorganism Growth
Chain of Infection Poster
Current Event

Bloodborne Pathogens

Bloodborne Pathogens Misconceptions
HIV, AIDS, and Hepatitis
Standard Precautions
Bloodborne Pathogens Standard
Reflection Questions and Discussion
Bloodborne Health Brochure
Current Event

Safety Precautions

Greet, Identify & Explain a Procedure
Body Mechanics
Safety Guidelines and Regulations
Environmental Safety
Reflection Questions and Discussion
Safety Guideline Poster
Current Event

Wellness and Nutrition

Wellness Role-play and Discussion
Wellness
Nutrition
Health Care
Stress and Planning for Wellness
Reflection Questions and Discussion
Wellness Campaign

Stress Reduction
Create a Board Game
Public Service Reminder
Current Event

1.	Academic Foundation - Understand human anatomy, physiology, common diseases and disorders, and medical math principles.	
1.1	Human Anatomy and Physiology	
1.11	Identify basic levels of organization of the human body.	6 / 6
a.	Chemical	Anatomy & Physiology
b.	Cellular	Anatomy & Physiology
c.	Tissue	Anatomy & Physiology
d.	Organs	Anatomy & Physiology
e.	Systems	Anatomy & Physiology
f.	Organism	Anatomy & Physiology
1.12	Identify body planes, directional terms, cavities, and quadrants.	4 / 4
a.	Body planes (sagittal, mid-sagittal, coronal/frontal, transverse/horizontal).	Medical Terminology
b.	Directional terms (superior, inferior, anterior/ventral, posterior/dorsal, medial, lateral, proximal, distal, superficial, and deep).	Medical Terminology
c.	Cavities (dorsal, cranial, spinal, thoracic, abdominal, and pelvic).	Medical Terminology
d.	Quadrants (upper right, lower right, upper left, and lower left).	Medical Terminology
1.13	Analyze basic structures and functions of human body systems (skeletal, muscular, integumentary, cardiovascular, lymphatic, respiratory, nervous, special senses, endocrine, digestive, urinary, and reproductive).	12 / 12
a.	Skeletal (bone anatomy, axial and appendicular skeletal bones, functions of bones, ligaments, types of joints)	Anatomy & Physiology
b.	Muscular (microscopic anatomy of muscle tissue, types of muscle, locations of skeletal muscles, functions of muscles, tendons, directional movements)	Anatomy & Physiology
c.	Integumentary (layers, structures and functions of skin)	Anatomy & Physiology
d.	Cardiovascular (components of blood, structures and functions of blood components, structures and functions of the cardiovascular system, conduction system of the heart, cardiac cycle)	Anatomy & Physiology
e.	Lymphatic (structures and functions of lymphatic system, movement of lymph fluid)	Anatomy & Physiology

f.	Respiratory (structures and functions of respiratory system, physiology of respiration)	Anatomy & Physiology
g.	Nervous (structures and functions of nervous tissue and system, organization of nervous system)	Anatomy & Physiology
h.	Special senses (structures and functions of eye, ear, nose and tongue; identify senses for sight, hearing, smell, taste, touch)	Anatomy & Physiology
i.	Endocrine (endocrine versus exocrine, structures and functions of endocrine system, hormones, regulation of hormones)	Anatomy & Physiology
j.	Digestive (structures and functions of gastrointestinal tract, chemical and mechanical digestion, structures and functions of accessory organs)	Anatomy & Physiology
k.	Urinary (structures and functions of urinary system, gross and microscopic anatomy, process of urine formation, urine composition, homeostatic balance)	Anatomy & Physiology
l.	Reproductive (structures and functions of male and female reproductive systems, formation of gametes, hormone production and effects, menstrual cycle, and conception)	Anatomy & Physiology
1.2	Diseases and Disorders	
1.21	Describe common diseases and disorders of each body system (such as: cancer, diabetes, dementia, stroke, heart disease, tuberculosis, hepatitis, COPD, kidney disease, arthritis, ulcers).	4 / 5
a.	Etiology	Anatomy & Physiology
b.	Pathology	Anatomy & Physiology
c.	Diagnosis	Anatomy & Physiology
d.	Treatment	Anatomy & Physiology
e.	Prevention	
1.22	Discuss research related to emerging diseases and disorders (such as: autism, VRSA, PTSD, Listeria, seasonal flu).	
1.23	Describe biomedical therapies as they relate to the prevention, pathology, and treatment of disease.	0 / 5
a.	Gene testing	
b.	Gene therapy	
c.	Human proteomics	
d.	Cloning	
e.	Stem cell research	

1.3	Medical Mathematics	
1.31	Demonstrate competency in basic math skills and mathematical conversions as they relate to healthcare.	3 / 3
a.	Metric system (such as: centi, milli, kilo)	Medical Mathematics
b.	Mathematical (average, ratios, fractions, percentages, addition, subtraction, multiplication, division)	Medical Mathematics
c.	Conversions (height, weight/mass, length, volume, temperature, household measurements)	Medical Mathematics
1.32	Demonstrate the ability to analyze diagrams, charts, graphs, and tables to interpret healthcare results.	Medical Mathematics
1.33	Demonstrate use of the 24-hour clock/military time.	Medical Mathematics
2.	Communications - Demonstrate methods of delivering and obtaining information, while communicating effectively.	
2.1	Concepts of Effective Communication	
2.11	Model verbal and nonverbal communication.	Communications
2.12	Identify common barriers to communication.	2 / 2
a.	Physical disabilities (aphasia, hearing loss, impaired vision)	Communications
b.	Psychological barriers (attitudes, bias, prejudice, stereotyping)	Communications
2.13	Identify the differences between subjective and objective information.	Communications
2.14	Interpret elements of communication using basic sender-receiver-message-feedback model.	Communications
2.15	Practice speaking and active listening skills.	Communications
2.16	Modify communication to meet the needs of the patient/client and be appropriate to the situation.	Communications
2.2	Medical Terminology	
2.21	Use common roots, prefixes, and suffixes to communicate information.	Medical Terminology

2.22	Interpret medical abbreviations to communicate information.	1 / 2
a.	Common abbreviations	Medical Terminology
b.	Joint Commission official "Do Not Use List"	
2.3	Written Communication Skills	1 / 2
2.31	Utilize proper elements of written and electronic communication (spelling, grammar, and formatting).	Communications
2.32	Prepare examples of technical, informative, and creative writing.	
3.	Systems - Identify how key systems affect services performed and quality of care.	
3.1	Healthcare Delivery Systems	
3.11	Compare healthcare delivery systems.	3 / 3
a.	Non-profit and for profit (such as: hospitals, ambulatory facilities, long-term care facilities, home health, medical and dental offices, mental health services)	Health Care Systems
b.	Government (such as: CDC, FDA, WHO, OSHA, Public Health systems/Health Departments, Veteran's Administration)	Health Care Systems
c.	Non-profit (such as: March of Dimes, American Heart Association)	Health Care Systems
3.12	Describe the responsibilities of consumers within the healthcare system (such as: self-advocacy, patient compliance, provider and consumer obligations).	Health Care Systems
3.13	Assess the impact of emerging issues on healthcare delivery systems (such as: technology, epidemiology, bioethics, and socioeconomics).	Multiple Locations
3.14	Discuss healthcare economics and common methods of payment for healthcare.	3 / 3
a.	Private health insurance (such as: Blue Cross, Affordable Care Act - ACA)	Health Care Systems
b.	Managed care (such as: HMOs, PPOs, medical home)	Health Care Systems
c.	Government programs (Medicare, Medicaid, Tricare, and Workers' Compensation)	Health Care Systems

4.	Employability Skills - Utilize employability skills to enhance employment opportunities and job satisfaction.	
4.1	Personal Traits of the Health Professional	
4.11	Identify personal traits and attitudes desirable in a member of the career ready healthcare team.	9 / 14
a.	Acceptance of criticism	Personal Qualities
b.	Competence	
c.	Dependability	Personal Qualities
d.	Discretion	Personal Qualities
e.	Empathy	The Health Assistant
f.	Enthusiasm	Personal Qualities
g.	Honesty	Personal Qualities
h.	Initiative	
i.	Patience	
j.	Responsibility	Personal Qualities
k.	Self-motivation	
l.	Tact	The Health Assistant
m.	Team player	Personal Qualities
n.	Willingness to learn	
4.12	Summarize professional standards as they apply to hygiene, dress, language, confidentiality and behavior.	Personal Qualities
4.2	Employability Skills	
4.21	Apply employability skills in healthcare.	10 / 14
a.	Chain of command	Personal Qualities
b.	Correct grammar	Health Care Careers
e.	Initiative	The Health Assistant
f.	Integrity	Personal Qualities The Health Assistant

g.	Loyalty	
h.	Positive attitude	Personal Qualities The Health Assistant
i.	Professional characteristics	Personal Qualities The Health Assistant
j.	Prompt and prepared	Personal Qualities The Health Assistant
k.	Responsibility	Personal Qualities The Health Assistant
l.	Scope of practice	Personal Qualities The Health Assistant
m.	Teamwork	Personal Qualities The Health Assistant
n.	Willing to learn	
c.	Decision making	
d.	Flexible	
4.3	Career Decision-making	2 / 2
4.31	Research levels of education, credentialing requirements, and employment trends in health professions.	Health Care Careers
4.32	Distinguish differences among careers within health science pathways (diagnostic services, therapeutic services, health informatics, support services, or biotechnology research and development).	Health Care Careers
4.4	Employability Preparation	
4.41	Develop components of a personal portfolio.	1 / 10
b.	Resume	Job Seeking Skills
c.	Sample Projects	
d.	Writing Sample	
e.	Work-based Learning Documentation	
g.	Service Learning/Community Service	
i.	Technology Skills	
j.	Leadership Examples	
a.	Letter of introduction	

f.	Oral Report	
h.	Credentials	
4.42	Identify strategies for pursuing employment (social media, personal networking, job sites, internships).	Job Seeking Skills
5.	Legal Responsibilities - Describe legal responsibilities, limitations, and implications on healthcare worker actions.	
5.1	Legal Responsibilities and Implications	
5.11	Analyze legal responsibilities and implications of criminal and civil law.	2 / 8
a.	Malpractice	Personal Qualities The Health Assistant
b.	Negligence	Personal Qualities The Health Assistant
c.	Assault	
d.	Battery	
e.	Invasion of privacy	
f.	Abuse	
g.	Liable	
h.	Slander	
5.2	Legal Practices	5 / 5
5.21	Apply standards for the safety, privacy and confidentiality of health information (HIPAA, privileged communication).	Health Information Technology The Health Assistant
5.22	Describe advance directives.	Legal & Ethical Responsibilities
5.23	Summarize the essential characteristics of a patient's basic rights within a healthcare setting.	Legal & Ethical Responsibilities The Health Assistant

5.24	Define informed consent.	The Health Assistant
5.25	Explain laws governing harassment and scope of practice.	Legal & Ethical Responsibilities Personal Qualities The Health Assistant
6.	Ethics - Understand accepted ethical practices with respect to cultural, social, and ethnic differences within the healthcare environment.	
6.1	Ethical Practice	2 / 3
6.11	Differentiate between ethical and legal issues impacting healthcare.	Legal & Ethical Responsibilities The Health Assistant
6.12	Identify ethical issues and their implications related to healthcare (such as: organ donation, in vitro fertilization, euthanasia, scope of practice, ethics committee).	Legal & Ethical Responsibilities
6.13	Utilize procedures for reporting activities and behaviors that affect the health, safety, and welfare of others (such as: incident report).	
6.2	Cultural, Social, and Ethnic Diversity	1 / 2
6.21	Discuss religious and cultural values as they impact healthcare (such as: ethnicity, race, religion, gender).	Communications
6.22	Demonstrate respectful and empathetic treatment of ALL patients/clients (such as: customer service, patient satisfaction, civility).	
7.	Safety Practices - 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.	

7.1	Infection Control	
7.11	Explain principles of infection control.	3 / 4
a.	Chain of infection	Infection Control
b.	Mode of transmission (direct, indirect, vectors, common vehicle [air, food, water], healthcare- associated infections [nosocomial], opportunistic)	Infection Control
c.	Microorganisms (non-pathogenic, pathogenic, aerobic, anaerobic)	Infection Control
d.	Classifications (bacteria, protozoa, fungi, viruses, parasites)	
7.12	Differentiate methods of controlling the spread and growth of microorganisms.	4 / 5
a.	Aseptic control (antisepsis, disinfection, sterilization, sterile technique)	Infection Control
b.	Standard precautions	Infection Control
c.	Isolation precautions	Infection Control
d.	Blood borne pathogen precautions	Bloodborne Pathogens The Health Assistant
e.	Vaccinations	
7.2	Personal Safety	2 / 2
7.21	Apply personal safety procedures based on Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations.	Bloodborne Pathogens Infection Control
7.22	Demonstrate principles of body mechanics.	Safety Precautions
7.3	Environmental Safety	
7.31	Apply safety techniques in the work environment.	1 / 3
a.	Ergonomics	Safety Precautions
b.	Safe operation of equipment	
c.	Patient/client safety measures (check area for safety)	
7.4	Common Safety Hazards	2 / 2
7.41	Observe all safety standards related to the Occupational Exposure to Hazardous Chemicals Standard (Safety Data Sheets (SDSs)). (www.osha.gov)	Safety Precautions
7.42	Comply with safety signs, symbols, and labels.	Safety Precautions

7.5	Emergency Procedures and Protocols	1 / 2
7.51	Practice fire safety in a healthcare setting.	Safety Precautions
7.52	Apply principles of basic emergency response in natural disasters and other emergencies (safe location, contact emergency personnel, follow facility protocols)	
8.	Teamwork - Identify roles and responsibilities of individual members as part of the healthcare team.	
8.1	Healthcare Teams	
8.11	Evaluate roles and responsibilities of team members.	3 / 3
a.	Examples of healthcare teams	Personal Qualities
b.	Responsibilities of team members	Personal Qualities
c.	Benefits of teamwork	Personal Qualities
8.12	Identify characteristics of effective teams.	6 / 10
a.	Active participation	Personal Qualities
b.	Commitment	Personal Qualities
c.	Common goals	Personal Qualities
d.	Cultural sensitivity	
e.	Flexibility	Personal Qualities The Health Assistant
f.	Open to feedback	
g.	Positive attitude	Personal Qualities The Health Assistant
h.	Reliability	
i.	Trust	Personal Qualities The Health Assistant
j.	Value individual contributions	
8.2	Team Member Participation	
8.21	Recognize methods for building positive team relationships (such as: mentorships and teambuilding).	

8.22	Analyze attributes and attitudes of an effective leader.	2 / 3
a.	Characteristics (interpersonal skills, focused on results, positive)	
b.	Types (autocratic, democratic, laissez faire)	Personal Qualities
c.	Roles (sets vision, leads change, manages accountability)	Personal Qualities
8.23	Apply effective techniques for managing team conflict (negotiation, assertive communication, gather the facts, clear expectations, mediation).	
9.	Health Maintenance Practices - Differentiate between wellness and disease. Promote disease prevention and model healthy behaviors.	
9.1	Healthy Behaviors	
9.11	Promote behaviors of health and wellness (such as: nutrition, weight control, exercise, sleep habits).	Wellness & Nutrition
9.12	Describe strategies for prevention of disease.	3 / 6
a.	Routine physical exams	Wellness & Nutrition
b.	Medical, dental, and mental health screenings	
c.	Community health education outreach programs	
e.	Stress management	Wellness & Nutrition
f.	Avoid risky behaviors	Wellness & Nutrition
d.	Immunizations	
9.13	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).	Wellness & Nutrition
10.	Technical Skills - Apply technical skills required for all career specialties and demonstrate skills and knowledge as appropriate.	
10.1	Technical Skills	2 / 2

10.11	Apply procedures for measuring and recording vital signs including the normal ranges (temperature, pulse, respirations, blood pressure, pain).	Client Status
10.12	Obtain training or certification in cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO) and first aid.	CPR Methods 2009
11.	Information Technology Applications - Utilize and understand information technology applications common across health professions.	
11.1	Key Principles of Health Information Systems	3 / 5
11.11	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).	Health Information Technology
11.12	Explore different types of health record data collection tools (such as: patient monitoring equipment, telemedicine, phone application, and medical wearable devices).	
11.13	Identify the types and content of an EHR/EMR (such as: pharmacy, laboratory, radiology).	Health Information Technology
11.14	Create documentation in EHR/EMRs that reflect timeliness, completeness, and accuracy.	Health Information Technology
11.15	Adhere to information systems policies, procedures, and regulations as required by national, state, and local entities.	
11.2	Privacy and Confidentiality of Health Information	4 / 5
11.21	Apply fundamentals of privacy and confidentiality policies and procedures (HIPAA).	Health Information Technology
11.22	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]).	Health Information Technology The Health Assistant

11.23	Identify common policies and procedures for proper access, disclosure and protection of personal health information (such as: passwords, administrative safeguards, database security).	Health Information Technology
11.24	Describe consequences of inappropriate use of health data in terms of disciplinary action.	Health Information Technology
11.25	Understand the principle to correct inaccurate information/errors entered into an EHR/EMR (such as: adding, clarifying, and correcting information).	
11.3	Basic Computer Skills	6 / 6
11.31	Apply basic computer concepts and terminology necessary to use computers and other mobile devices.	Health Information Technology
11.32	Demonstrate basic computer troubleshooting procedures (such as: restart, check power supply, refresh browser, check settings).	Office Equipment
11.33	Demonstrate use of file organization and information storage.	Office Equipment
11.34	Identify uses of basic word processing, spreadsheet, and database applications.	Office Equipment
11.35	Evaluate validity of web-based resources.	Web Research
11.36	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).	Computing Systems Digital Citizenship