

MS - Introduction to Health Professions

This course provides students with an introduction to many healthcare careers and the safety procedures and interpersonal communication skills required for them. The course will enable students to receive initial exposure to healthcare science skills; attitudes applicable to healthcare including the concepts of health, wellness, and preventative care; and responsibilities of today's healthcare provider. Mastery of skills through project-based learning, technical skills practice, and group activities will provide students with an opportunity to decide if they want to continue this course of study in high school and/or at a post-secondary institution. Students will be introduced to the five career pathways developed by NCHSE (the National Consortium on Health Science Education): therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.

Grades: Recommended for grades 7 or 8

This course is recommended for: Students with a desire learn more about Healthcare.

Pre-requisites: None

Foundation Standard 7: Safety Practices

SAFETY PRACTICES AND INFECTION CONTROL:

Students will demonstrate the proper implementation of safe work practices to prevent injury or illness.

- Demonstrate the proper method for hand washing.
- Demonstrate and/or list the correct sequence of body motions for lifting, pushing, and turning.
- Discuss the causes, prevention, and effects of HIV/AIDS and hepatitis.

Foundation Standard 2: Communications

HEALTHCARE COMMUNICATIONS:

Students will effectively communicate orally and in writing, applying knowledge of healthcare communications.

- Differentiate between verbal and non-verbal communication and evaluate the components and barriers to effective communication.
- Introduction to basic medical terminology (included below)

Foundation Standard 4: Employability Skills

Personal Traits of the Health Professional:

Identify some of the personal traits and attitudes desirable in a member of the career ready healthcare team.

- Dependability
- Discretion
- Enthusiasm
- Honesty
- Patience
- Responsibility
- Self-motivation
- Team player- Define and Recognize methods for building positive team relationships
- Willingness to learn

Foundation Standard 9: Health Maintenance Practices

HEALTHY BEHAVIORS :

Differentiate between wellness and disease. Promote disease prevention and model healthy behaviors.

- Promote behaviors of health and wellness (such as: nutrition, weight control, exercise, sleep habits).
- Strategies for prevention of disease.
 - Routine physical exams
 - Medical, dental, and mental health screenings
 - Immunizations
 - Avoid risky behaviors
 - Stress Management

Foundation Standard 8: Teamwork

HEALTHCARE TEAMS AND LEADERSHIP:

Identify roles and responsibilities of individual members and leaders as part of the healthcare team.

- Examples of healthcare teams
- Responsibilities of team members
- Benefits of teamwork
- Leadership qualities
- Introduction of HOSA- Future Health Professionals

Foundation Standard 4.3 Career Decision Making

HEALTH CAREER PATHWAYS:

Distinguish differences among careers within health science pathways (diagnostic services, therapeutic services, health informatics, support services, or biotechnology research and development).

- Discuss the focus of each pathway.
- List 3 examples of careers that fall within each pathway.
- Choose at least one career in each pathway to explore in detail.
 - Job Duties
 - Education
 - Places they may be employed
 - Skills and/or courses needed to be successful
 - Salary range
 - Simulate some activities associated with the chosen pathway
 - Students should participate in team activities with sample tasks.

Therapeutic Services

Individuals pursuing a career in the Therapeutic Services Pathway are focused primarily on changing the health status of the patient over time. Health professionals in this pathway work directly with patients; they may provide care, treatment, counseling and health education information.

Example: INTRODUCTION TO PHARMACY: Students will explore the different careers available in the field of pharmacy.

- Compare and contrast the roles and responsibilities of pharmacists, pharmacy aides, and pharmacy technicians, along with their education, training requirements, salary ranges, job outlooks, and facilities in which they work.
- Maintain mock pharmacy inventory.
- Fill simulated written prescriptions or requests for prescription refills with simulated medications.
- Verify the accuracy and completeness of prescription information. (patient name, date of birth, address, phone number, name of drug, strength of drug, route of drug, directions for taking drug)
 - Prepare prescription labels.
 - List routes of medication administration and their appropriate uses.

Example: INTRODUCTION TO NURSING: Students will assess the career pathways available in the nursing field.

- Compare and contrast the roles and responsibilities of registered nurses, licensed practical nurses, and nursing assistants, along with their education and training requirements, salary ranges, job outlooks, and facilities in which they work.
- Describe the personal characteristics, attitudes, and rules of appearance that apply to individuals in nursing careers.
- Describe how social, religious, ethnic, and cultural beliefs impact patient care.
- Identify moral and ethical issues impacting nursing care.
- Evaluate the roles of advanced practice nurses (e.g., nurse practitioners, nurse anesthetists).
- Perform vision screening and colorblindness screening.
- Sample tasks: Demonstrate at least one of the following:
 - Measuring and recording of height and weight.
 - Measuring and recording of TPR (temperature, pulse, and respiration).
 - Measuring and recording of blood pressure.
 - Patient education brochure.

Diagnostic Services

Individuals pursuing a career in the Diagnostic Services Pathway use tests and evaluations that aid in the detection, diagnosis and treatment of diseases, injuries or other physical conditions

Example: INTRODUCTION TO MEDICAL LABORATORY TECHNOLOGY: Students will assess careers opportunities in the field of medical laboratory technology.

- Compare and contrast the roles and responsibilities of pathologists, medical Laboratory technologists, medical laboratory technicians, medical laboratory assistants, and phlebotomists, along with their education, training requirements, salary ranges, job outlooks, and facilities in which they work.
- Identify and operate the parts of a microscope.
- Distinguish between a red blood cell, white blood cell, and platelet.
- Differentiate between arterial, venous, and capillary blood and ways of obtaining each type of sample.

- Sample tasks: Demonstrate at least one of the following:
 - Cleansing the skin in preparation for a capillary puncture.
 - Placing a tourniquet in preparation for a venipuncture.
 - Testing simulated urine using a reagent strip
 - Measuring blood sugar (glucose) level using simulated blood and a glucose monitor

Health Informatics

Individuals pursuing a career in the Health Informatics Pathway can expect to be involved in many different levels of health care related employment. This pathway includes health care administrators who manage health care agencies as well as those individuals who are responsible for managing all of the patient data and information, financial information, and computer applications related to health care processes and procedures.

Example: INTRODUCTION TO HEALTH INFORMATICS: Students will differentiate careers available in the field of health informatics/healthcare information systems.

- Compare and contrast the roles and responsibilities of healthcare administrators, medical illustrators, health information technologists, medical coders, and health unit coordinators, along with their education, training requirements, salary ranges, job outlooks, and facilities in which they work.
- Identify what information may be kept in a patient's medical record.
- Recognize how technology may be used to improve the delivery of patient care and patient charting.
- Define the term HIPAA and recognize the importance of patient privacy.
- Sample tasks – Demonstrate at least one of the following:
 - Proper phone etiquette and recording of a phone message during simulated phone calls.
 - Proper filing of patient charts (e.g., alphabetically, by patient number).
 - Assigning of diagnostic and procedure codes after reviewing patients' charts.
 - Creation of a medical illustration.
 - Creation of an educational presentation about a healthcare issue or a body system.

Support Services

- Individuals pursuing a career in the Support Services Pathway provide a therapeutic environment for the delivery of health care. Support Services offers a full range of career opportunities from entry level to management, including technical and professional careers.

INTRODUCTION TO CENTRAL SUPPLY: Students will explore the different careers available in the field of central supply.

- Compare and contrast the roles and responsibilities of central supply coordinators, central supply technicians, and central supply assistants, along with their education, training requirements, salary ranges, jobs outlooks, and facilities in which they work.
- Identify the areas of the central supply/processing department.
- Describe the proper flow of instruments and equipment in the central supply department.
- Evaluate potential causes and methods of transmitting infection.
- Compare and contrast clean versus sterile and sterile versus aseptic control.
- Describe the process for handling and storage of sterile and non-sterile items.
- Explain the purchasing process in order to maintain adequate quantities of supplies, equipment, instruments, and medical device
- Tasks:
 - Use simulated tools to wrap as if they were surgical instruments for the autoclave.
 - Define autoclave
 - indicate how you would tell if the instrument has been sterilized
 - What is the average temperature range and length of time it takes for something to be sterilized.
 - Research and list other ways that Central Supply may use to clean reusable medical devices. (Chemical disinfection, ultrasonic unit)

Biotechnology Research and Development

Individuals pursuing a career in the Biotechnology Research and Development pathway involve bioscience research and development as it applies to human health. These scientists may study diseases to discover new treatments or invent medical devices used to directly assist patients or to improve the accuracy of diagnostic tests.

Example: INTRODUCTION TO BIOMEDICAL CAREERS: Students will evaluate career choices in the biotechnology field.

- Compare and contrast the roles and responsibilities of workers in the field of genetics, biomedical engineering, toxicology, microbiology, and forensics, along with their education, training requirements, salary ranges, job outlooks, and facilities in which they work.
- Describe computer applications and biomedical devices in healthcare.
- Explore the structure of DNA and its relationship to the cell.
- Evaluate forensic techniques.
- Analyze the benefits of biomedical research.
- Differentiate the ABO and Rh blood types.
- Sample tasks – Demonstrate at least one of the following:
 - Separating DNA.
 - Testing of simulated blood for ABO and Rh type.
 - Fingerprinting.

- Identification of bacteria.
- Researching and debating a selected bioethical issue.

SEE CLASSROOM RESOURCES AND TABLES BELOW

STUDENT GROUP PROJECT

Career Chosen _____

Sample poster objectives:

- Job Duties
- Education
- Places they may be employed
- Skills and/or courses needed to be successful
- Salary range
- Projected job outlook
- Works cited- citation of references used
- Artistic design – appealing to the eye
- Originality
- Extra Credit: - Demonstrate a skill associated with this position or bring a guest speaker.

Present a five (3-5) minute prepared oral presentation to the class. Paper or electronic notecards (on a tablet, smart phone, laptop, etc.) may be used for the oral presentation. The presentation may include but is not limited to why they chose this career/career cluster, what they learned by researching this career/career cluster, what forms of research they used to complete the display, and what they included on the display and why.

Poster Presentation Rubric:

A. Career information presented in a clear and concise manner. **50 points**

B. Oral presentation demonstrates insight and a deep understanding of the career or career cluster. **25 points**

C. Team members were able to share stories, examples, and experiences that illustrate the career or career cluster, and how the career fits into the healthcare system. **25 points**

Samples of some BASIC MEDICAL TERMINOLOGY

Morning – before noon: ac, AC

discontinue: d/c, dc

Before meals: ac

do not resuscitate: DNR

After meals: pc

dead on arrival: DOA

bedtime: hs

date of birth: DOB

Right ear: AD

date of death: DOD

Left ear: AS

diagnosis: DX, dx

Both ears: AU

electrocardiogram: ECG, EKG

As desired: ad lib

electroencephalogram: EEG

As tolerated: as tol

ear, nose and throat: ENT

ASAP – as soon as possible

fracture: Fx

Everyday qd

drop, drops: gt, gtt, gtts

Every other day: qod

high blood pressure: HBP

Twice a day: bid

Hypertension: HTN (same as HBP)

Three times a day: tid

History: Hx, hx

Four times a day: qid

HIV: human immunodeficiency virus

Body mass index: BMI

(AIDS virus)

Bathroom privileges: BRP

Intake and Output: I&O

Complete Blood Count: CBC

Intensive care unit: ICU

Centers for Disease Control: CDC

Intravenous: IV

Central Nervous System: CNS	Intramuscular: IM
Cardiopulmonary Resuscitation: CPR	Subcutaneous: SQ, SC, sc
Laxative of choice: LOC	as needed: prn
Level of consciousness: LOC	right: rt
Long Term Care: LTC	left: lt, lft
Myocardial Infarction (heart attack): MI	rule out: R/O
Midnight: MN	Range of motion: ROM
Motor Vehicle accident: MVA	Recommended Daily Allowance: RDA
Not applicable: N/A	Prescription/Take: Rx
No complaints: N/C	without: w/o
Nasogastric tube: NG, ng, N/G	short of breath: SOB
No known allergies: NKA	if necessary: sos
Nausea and vomiting: N&V, N/V	Signs and Symptoms: S&S, S/S
Right eye: OD	Symptom: Sx
Left eye:	immediately: stat
Both eyes: OU	temperature, pulse, respiration: TPR
Overdose: od	treatment: tx
Over the counter: OTC	upper respiratory infection: URI
Office Visit: OV	urinary tract infection: UTI
Occupational Safety and Health Administration: OSHA	
Out of bed: OOB	ointment: ung
After noon: PM	venereal disease: VD
By mouth: po	verbal order: VO

Personal Protective Equipment: PPE

vital signs: VS

Before an operation: Pre-Op

After an operation: post-op

Within normal limits: WNL

Wheelchair: w/c

Without: w/o, wo

Year to date: YTD

Right upper quadrant: RUQ

Right Lower quadrant: RLQ

Left upper quadrant: LUQ

Left lower quadrant: LLQ

Samples of some WORD PARTS:

PREFIX- A syllable or a word placed at the beginning of a word.

a-without

cyt- cell

ab- away from

dys- difficult, painful

ad- toward

endo - within

anti – against

ec-ecti-ecto- outside

aur- ear

fore- in front of

auto- self

hist- tissue

a/pnea- without or lack of breathing

hemi- half

ante- before

infra-beneath

cardi – pertaining to the heart

inter- between

cryo-cold

intra- within

hyper-above

macro- large

hypo- below	micro-small
epi- around, upon, over , upper	mono- one , single
multi- many, much, large amount	noct- night
neo- new	pre- before
non- no	post- after
ost- bone	necr- death
narc-sleep	path- disease
pyr-heat, fever	salping – tube
tach- fast	brady- slow
trans- across	scler- hardening

SUFFIX – Syllable or word placed at the end of a word.

Inflammation-itis	ectomy- surgical removal of
Emesis- vomit	emia- blood
Esis-condition of	cise-cut
Cide- causing death	blast-germ/embryonic cell
Genesis- production, development, creation	genous- type, kind
Ism- condition, theory, state of being	kinetic – motion
Ology or logy- study of	lys- destruction of
Megaly – large	oma- tumor or swelling
Orrhea- flow or discharge	osis – process, condition, state
Otomy- cutting into	paresis- paralysis
Penia- lack of, deficiency	phagia- swallow

Ptosis- drooping down, sagging

trophy-nutrition, growth, development

Sclerosis- hardening

scopy- observation

Use the above abbreviations and word parts to help you understand medical language such as , but not limited to the words below. Other resources would be helpful, as not all definitions are in this packet.

Autophobia

cardiomegaly

dyskinetic

hematology

Cryotherapy

hemiplegia

fibrogenesis

rhinorrhea

Germicide

multiracial

atrophy

necrosis

Bradycardia

cystoscopy

epicarditis

narcolepsy

Tachycardia

diarrhea

pyrexia

meningitis

Endotracheal

septicemia

sublingual

hypotension

Excise

post- operative

hemiparesis

exogenous

Textbook and online RESOURCES

Winger, Blahnik; Goodheart-Willcox; 2016 Introduction to Health Science: Pathways to Your Future.

Simmers-Nartker, Simmers-Kobelak; 2014 Simmers DHO Health Science- 8th edition

National Consortium for Health Science Education – NCHSE; National Healthcare Foundation Standards – May 2015

Georgia Health Science – Middle School Standards – for reference

Texas Health Science – Middle School Standards – for reference

South Carolina Health Science – Secondary Standards – for reference.

www.besomethingamazing.com – Career website created by South Carolina Hospital Association

www.schosa.org – SC HOSA Future Health Professionals

www.hosa.org – National HOSA Future Health Professionals