Title: **Human Structure, Function, and Disease (B)**

Course Description: Builds on the knowledge and skills of Human Structure, Function, and Disease (A) concentrating on the remaining systems, Nervous, Endocrine, Urinary, Reproductive and Digestive. Explores information technology in healthcare. Medical terminology and medical math are integrated throughout.

Curricular Activities: HOSA–Future Health Professionals, HOSA - Future Health Professionals, Work-based Learning Internships and Apprenticeships

NCHSE Resources

- Health Science Curriculum Enhancements
- Work-based Learning Guide
- National Health Science Standards

End of Course Certificate

- Human Structure Function Disease (B)

Additional Stackable Certificates

- Foundations of Healthcare Professions
- Essential Healthcare Practices
- Human Structure Function Disease (A)

End of Program Certificate

- National Health Science Certificate

1.0 Medical Terminology

(Based on National Health Science Standards 2.2.1, 2.2.2)

Demonstrate methods of delivering and obtaining information, while communicating effectively.

1.1 Use common roots, prefixes, and suffixes to communicate information regarding body systems, diseases, and disorders.

1.2 Interpret common medical abbreviations to communicate information.

2.0 Anatomy and Physiology

(Based on National Health Science Standards 1.1.2 g, h, I, j, k)

Understand human anatomy, physiology, common diseases and disorders, and medical math principles.

2.1 Nervous System

2.1.1 Structures of the nervous system

- Identify organs of the nervous system
- Identify structures of the special sense organs
- Differentiate CNS and PNS
- Differentiate sympathetic and parasympathetic

2.1.2 Functions of the nervous system

- Sensation
- Movement
- Processing

2.2 Endocrine System

2.2.1 Structures of the endocrine system

- Identify endocrine glands

2.2.2 Functions of the endocrine system

- Production of hormones
- Regulation of body processes
- Controls metabolism
- Regulates growth, development, and maturation

2.3 Digestive System

2.3.1 Structures of the digestive system

- Identify digestive organs in sequence
- Differentiate between alimentary and accessory organs

2.3.2 Functions of the digestive system

- Chemical and mechanical digestion
- Absorption of nutrients
- Excretion of waste

2.4 Urinary System

2.4.1 Structures of the urinary system

- Identify urinary organs
- Identify gross and microscopic anatomy of the kidney

2.4.2 Functions of the urinary system
- Process of urine formation
- Urine composition
- Homeostatic balance

2.5 Reproductive System

2.5.1 Structures of the reproductive system
- Identify female reproductive organs
- Identify male reproductive organs

2.5.2 Functions of the reproductive system
- Formation of gametes
- Production of hormones

3.0 Diseases and Disorders (Nervous, Endocrine, Digestive, Urinary, Reproductive)
(Based on National Health Science Standards 1.2, 1.2.1, 1.2.2)

3.1 Describe etiology, pathology, diagnosis, treatment, and prevention of common diseases and disorders, including, but not limited to the following:
- Bipolar disorder
- Cancer
- Cataracts
- Concussion / Traumatic Brain Injury (TBI)
- Diabetes
- Dementia
- Gastric ulcer
- Hepatitis
- Sexually Transmitted Infection (STI)
- Urinary Tract Infection (UTI)

4.0 Information Technology in Healthcare
(Based on National Health Science Standards 11.1.1, 11.1.2, 11.1.3, 11.1.4)

Apply information technology practices common across health professions.

4.1 Key Principles, components, and practices of Health Information Systems

4.11 Identify components of an electronic health record (EHR) and/or electronic medical record (EMR).
- Diagnostic tests
- History and physical
- Medications
- Patient demographics
- Progress notes
- Treatment Plan

4.1.2 Explore different types of health data collection tools.
- Medical wearable devices
- Patient monitoring equipment

- Phone application
- Telemedicine/telehealth

4.1.3 Create electronic documentation that reflects timeliness, completeness, and accuracy.

4.1.4 Adhere to information systems policies, procedures, and regulations as required by national, state, and local entities.

5.0 Medical Mathematics

(Based on National Health Science Standards 1.3.1, 1.3.2, 1.3.3)

5.1 Demonstrate competency using basic math skills and mathematical conversions as they relate to healthcare.

5.2 Demonstrate the ability to analyze diagrams, charts, graphs, and tables to interpret healthcare results.

**Review National Health Science Standards 4: Employability Skills and 7: Safety, before entering work-based learning opportunities, if appropriate for your program.*