**Course Description:**

This course focuses on the applications of the rules for constructing and defining medical terms with an emphasis on building a working medical vocabulary. Topics include using the appropriate abbreviations and symbols for anatomical, physiological and pathological classifications and the associated medical specialties and procedures. Students will decipher medical terms by identifying and using word elements with an emphasis on derivation, meaning, and pronunciation. Further, students will interpret and translate medical records and documents.

**Strand 1.**  **Business Operations/21st Century Skills**

Learners apply principles of economics, business management, marketing and employability in an entrepreneur, manager and employee role to the leadership, planning, developing and analyzing of business enterprises related to the career field.

**Outcome: 1.1.**  **Employability Skills**

Develop career awareness and employability skills (e.g., face‐to‐face, online) needed for gaining and maintaining employment in diverse business settings.

1.1.2. Identify the scope of career opportunities and the requirements for education, training,

certification, licensure and experience.

*An “X” indicates that the pathway applies to the outcome.*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pathways** | X | Health Information Management | X | Medical Bioscience | X | Allied Health and Nursing | | X | Exercise Science and Sports Medicine | X | Therapeutic Services |
| **Green Practices** |  | Green-specific |  | Context-dependent | | X | Does not apply | | |  |  |

**Strand 2. Human Body System**

Learners will describe the various anatomy, physiology, and pathophysiology associated with body systems and alterations related to the normal developmental process, obtain a health history, perform an evaluation of the body systems, and document using medical terminology.

**Outcome: 2.1. Human Anatomy, Physiology, and Pathophysiology**

Describe the various human body systems, alterations related to the normal developmental process and possible dysfunctions.

**Competencies**

2.1.1. Identify body planes, directions, cavities, quadrants and regions.

2.1.2. Describe the physical characteristics, components and function of blood (e.g., ABO, Rh, blood cells, precursors and respiratory)

2.1.3. Describe the structures and functions of the cardiovascular system and trace the path of blood and identify factors affecting blood flow.

2.1.4. Describe how blood pressure is controlled and identify factors influencing changes in blood pressure.

2.1.5. Describe the structures and functions of the respiratory system.

2.1.6. Describe function of nerve tissue, nervous system, including regions of the brain.

2.1.7. Describe the structures and functions of the musculoskeletal system.

2.1.8. Describe the structures and functions of the digestive/excretory system.

2.1.9. Describe the structures and functions of the renal/urinary system.

2.1.10. Describe the structures and functions of the immune system.

2.1.11. Describe the structures and functions of the endocrine system.

2.1.12. Differentiate between the structures and functions of the male and female reproductive systems.

2.1.13. Describe the structures and functions of the integumentary system.

2.1.14. Explain the difference between pathology and the conditions typically observed during a disease state.

*An “X” indicates that the pathway applies to the outcome.*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pathways** | X | Health Information Management | X | Medical Bioscience | X | Allied Health and Nursing | | X | Exercise Science and Sports Medicine | X | Therapeutic Services |
| **Green Practices** |  | Green-specific |  | Context-dependent | | X | Does not apply | | |  |  |

**Outcome: 2.3. Medical Terminology**

Decipher medical terms through word origin and structure with an emphasis on derivation, meaning, pronunciation, and spelling.

**Competencies**

2.3.1. Build and decipher medical term meanings by identifying and using word elements (e.g., word roots, prefixes, suffixes, combining forms).

2.3.2. Apply the rules used to build singular and plural forms of medical terminology derived from the Greek and Latin language.

2.3.3 Use diagnostic, symptomatic and procedural terms to read and interpret various medical reports.

2.3.4. Use abbreviations and symbols to identify anatomical, physiological and pathological classifications and the associated medical specialties and procedures.

2.3.5. Communicate medical instructions and prepare medical documents using medical terminology..

*An “X” indicates that the pathway applies to the outcome.*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pathways** | X | Health Information Management | X | Medical Bioscience | X | Allied Health and Nursing | | X | Exercise Science and Sports Medicine | X | Therapeutic Services |
| **Green Practices** |  | Green-specific |  | Context-dependent | | X | Does not apply | | |  |  |

**Strand 3. Therapeutic Interventions**

Learners will assist with improving the individual's health outcome and quality of life throughout the lifespan within their scope of practice.

**Outcome: 3.3. Pharmaceutical Interventions**

Prepare, administer, store and document medications and reactions and outcomes according to laws, regulations and authorized health care provider orders and protocols.

**Competencies**

3.3.1. Identify and define terms related to drugs, pharmacology and medicines.

3.3.2. Identify drug classifications.

3.3.3. Recognize trade and generic names of prescription medications, over‐the‐ counter drugs and herbal preparations.

*An “X” indicates that the pathway applies to the outcome.*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pathways** | X | Health Information Management | X | Medical Bioscience | X | Allied Health and Nursing | | X | Exercise Science and Sports Medicine | X | Therapeutic Services |
| **Green Practices** |  | Green-specific |  | Context-dependent | | X | Does not apply | | |  |  |

**Strand 4. Assistive Care**

Learners demonstrate the skills and knowledge to provide personal assistive care for the activities of daily living to a variety of individuals across stages of development within their scope of practice.

**Outcome: 4.1. Scope of Practice**

Describe the roles and responsibilities of assistive personnel and identify the medical specialists who treat disorders of each body system.

**Competencies**

4.1.4. Describe the primary purpose of different healthcare settings.

4.1.5. Identify the medical specialists who treat disorders of each body system.

*An “X” indicates that the pathway applies to the outcome.*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pathways** | X | Health Information Management | X | Medical Bioscience | X | Allied Health and Nursing | | X | Exercise Science and Sports Medicine | X | Therapeutic Services |
| **Green Practices** |  | Green-specific |  | Context-dependent | | X | Does not apply | | |  |  |

**Outcome: 4.3. Pathogenic Microorganisms, Infection Control and Infection**

Use principles of infection control to prevent the growth and spread of pathogenic microorganisms and infection.

**Competencies**

4.3.1. Describe the chain of infection.

4.3.2. Describe mechanisms for the spread of infection.

4.3.3. Describe methods of controlling or eliminating microorganisms and the importance of practices that hinder the spread of infection.

*An “X” indicates that the pathway applies to the outcome.*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pathways** | X | Health Information Management | X | Medical Bioscience | X | Allied Health and Nursing | | X | Exercise Science and Sports Medicine | X | Therapeutic Services |
| **Green Practices** |  | Green-specific |  | Context-dependent | | X | Does not apply | | |  |  |

**Strand 5. Bioscience Research and Development**

Learners will demonstrate the skills and knowledge of interpreting laboratory requests, using personal protective equipment and hazardous material containment, specimen collection procedures, a variety of laboratory testing and techniques and maintenance of laboratory equipment and

supplies.

**Outcome: 5.3. Microbiology Testing &Technology**

Describe the morphology and process of reproduction of microorganisms important in clinical disease and biotechnology applications and perform assays as a diagnostic tool to detect the presence of a pathogen when handling and storing specimens and preservatives for biologicals.

**Competencies**

5.3.1. Explain microbial taxonomy and classification systems and use to identify microbial organisms.

5.3.2. Compare and contrast cellular structure and functions of prokaryotic, eukaryotic cells.

5.3.3. Differentiate between bacterial metabolism, reproduction, cell structures, and their functions.

5.3.4. Identify aerobic bacteria through morphological, physical and biochemical properties.

*An “X” indicates that the pathway applies to the outcome.*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pathways** | X | Health Information Management | X | Medical Bioscience | X | Allied Health and Nursing | | X | Exercise Science and Sports Medicine | X | Therapeutic Services |
| **Green Practices** |  | Green-specific |  | Context-dependent | | X | Does not apply | | |  |  |

**Outcome: 5.8. Biotechnology Research and Experiments**

Conduct a problem‐based study, applying scientific methodology and using descriptive statistics to communicate and support predictions and conclusions.

**Competencies**

5.8.12. Prepare and present findings using scientific reports.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pathways** | X | Health Information Management | X | Medical Bioscience | X | Allied Health and Nursing | | X | Exercise Science and Sports Medicine | X | Therapeutic Services |
| **Green Practices** |  | Green-specific |  | Context-dependent | | X | Does not apply | | |  |  |

**Strand 6. Health Information Management**

Learners will demonstrate basic computer literacy, health information literacy and skills, confidentially and privacy of health records, information security and basic skills in the use of electronic health records.

**Outcome: 6.1. Health Information Literacy**

Apply principles of systems operations used to capture, retrieve, and maintain information from internal and external sources.

**Competencies**

6.1.1. Define health information management (HIM) and differentiate among data, information and

competency.

6.1.5. Recognize standard data definitions, vocabularies, terminologies, nomenclatures (e.g., systematically organized computer processable collection of medical terms (SNOMED‐CT), classifications (e.g., International Statistical Classification of Diseases and Related Health Problems (ICD-10), Healthcare Common Procedure Coding System (HCPCS), Current Procedural Terminology (CPT), and relevant healthcare data sets (e.g., The Outcome and Assessment Information Set (OASIS), epic, The Healthcare Effectiveness Data and Information Set (HEDIS), Uniform Hospital Discharge Data Set (UHDDS) as used in the organization’s health information systems.

6.1.6.. Differentiate between the types and content of patient health records and the data collected (e.g., paper‐based, electronic medical/health records, personal health records, clearinghouse).

6.1.7. Apply concepts of health record documentation requirements of external agencies and organizations (e.g., accrediting bodies, regulatory bodies, professional review organizations, licensure, reimbursement, discipline‐specific, evidence-based good practice).

6.1.8. Describe typical internal organizational health record documentation requirements, policies and procedures.

6.1.9. Explain how to apply policies and procedures to ensure organizational compliance with regulations and standards, including Medicare, Medicaid, and other third party payers.

*An “X” indicates that the pathway applies to the outcome.*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pathways** | X | Health Information Management | X | Medical Bioscience | X | Allied Health and Nursing | | X | Exercise Science and Sports Medicine | X | Therapeutic Services |
| **Green Practices** |  | Green-specific |  | Context-dependent | | X | Does not apply | | |  |  |

**Outcome: 6.2. Confidentiality, Privacy and Security**

Apply the fundamentals of confidentiality, privacy and security to communicate health/medical information accurately and within legal/regulatory bounds to other external entities.

**Competencies**

6.2.1. Identify components of the legal system.

6.2.4. Identify what constitutes the authorized access, release and use of personal health information.

6.2.5. Distinguish confidential and non‐confidential information, and document and prioritize requests for personal health information according to privacy and confidentiality guidelines.

6.2.8. Implement administrative, physical and technical safeguards to maintain data integrity and validity.

6.2.10. Describe the relevance of federal, state and private sector initiatives related to the privacy, security and confidentiality of health information technology.

*An “X” indicates that the pathway applies to the outcome.*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pathways** | X | Health Information Management | X | Medical Bioscience | X | Allied Health and Nursing | | X | Exercise Science and Sports Medicine | X | Therapeutic Services |
| **Green Practices** |  | Green-specific |  | Context-dependent | | X | Does not apply | | |  |  |

**Outcome: 6.3. Electronic Health Records and Coding**

Perform functions within electronic health records (EHRs) and electronic medical records (EMRs) to ensure accurate information, retrieve information and maintain data.

**Competencies**

6.3.1. Create and update documents within the electronic health record and electronic health systems.

6.3.2. Locate and retrieve information in the electronic medical/health records and other sources.

6.3.3. Input and use health information applying management principles to ensure quality, compliance, and integrity.

6.3.4. Apply methods to ensure authenticity, timeliness, and accuracy of health data entries.

6.3.5. Document scope of practice information in an electronic health/medical record.

6.3.6. Access and apply reference material available through an electronic health/medical record or other reference system.

6.3.7. Resolve minor technology problems associated with using an electronic health/medical record.

6.3.8. Follow access protocols for entry to an electronic health/medical record.

6.3.9. Manage documents within the electronic health/medical record using standard protocol.

6.3.10. Complete health information management (HIM) functions (e.g., scanning, transcription, voice recognition, releasing information) in a paper or electronic environment.

6.3.11. Perform procedural and diagnostic coding according to federal, state and thirty party payer guidelines.

6.3.12. Complete the common insurance claim forms ensuring federal, state and third‐party insurance reimbursements are included and complete payer compliance claim forms.

6.3.13. Apply accurate medical terminology to electronic health/medical records.

*An “X” indicates that the pathway applies to the outcome.*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pathways** | X | Health Information Management | X | Medical Bioscience | X | Allied Health and Nursing | | X | Exercise Science and Sports Medicine | X | Therapeutic Services |
| **Green Practices** |  | Green-specific |  | Context-dependent | | X | Does not apply | | |  |  |