**Course Description:**

Students will complete comprehensive fitness evaluations and develop individualized training programs. Students will administer lab and field tests of cardiovascular endurance, body composition, joint flexibility and muscular strength, power, and endurance. Emphasis is placed on assessing body composition, neuromuscular flexibility, agility, balance, coordination, and proprioception. Additionally, students will identify components of physical fitness and communicate how physical activity impact health and wellness.

**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.

Competencies

1.1.1. Identify the knowledge, skills and abilities necessary to succeed in careers.

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

1.1.3. Develop a career plan that reflects career interests, pathways and secondary and postsecondary options.

1.1.4. Describe the role and function of professional organizations, industry associations and organized labor and use networking techniques to develop and maintain professional relationships.

1.1.5. Develop strategies for self‐promotion in the hiring process (e.g., filling out job applications, résumé writing, interviewing skills, portfolio development).

1.1.6. Explain the importance of work ethic, accountability and responsibility and demonstrate associated behaviors in fulfilling personal, community and workplace roles.

1.1.7. Apply problem‐solving and critical‐thinking skills to work‐related issues when making decisions and formulating solutions.

1.1.8. Identify the correlation between emotions, behavior and appearance and manage those to establish and maintain professionalism.

1.1.9. Give and receive constructive feedback to improve work habits.

1.1.10. Adapt personal coping skills to adjust to taxing workplace demands.

1.1.11. Recognize different cultural beliefs and practices in the workplace and demonstrate respect for them.

1.1.12. Identify healthy lifestyles that reduce the risk of chronic disease, unsafe habits and abusive behavior.

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

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

**Outcome 1.2. Leadership and Communications**

Process, maintain, evaluate and disseminate information in a business. Develop leadership and team building to promote collaboration.

**Competencies**

1.2.1. Extract relevant, valid information from materials and cite sources of information (e.g., medical reports, fitness assessment, medical test results).

1.2.2. Deliver formal and informal presentations.

1.2.3. Identify and use verbal, nonverbal and active listening skills to communicate effectively.

1.2.4. Use negotiation and conflict‐resolution skills to reach solutions.

1.2.5. Communicate information for an intended audience and purpose.

1.2.6. Use proper grammar and expression in all aspects of communication.

1.2.7. Use problem‐solving and consensus‐building techniques to draw conclusions and determine next steps.

1.2.8. Identify the strengths, weaknesses and characteristics of leadership styles that influence internal and external workplace relationships.

1.2.9. Identify advantages and disadvantages involving digital and/or electronic communications.

1.2.10. Use interpersonal skills to provide group leadership, promote collaboration and work in a team.

1.2.11. Write professional correspondence, documents, job applications and résumés.

1.2.12. Use technical writing skills to complete forms and create reports.

1.2.13. Identify stakeholders and solicit their opinions.

1.2.14. Use motivational strategies to accomplish goals.

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

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

**Strand 2. Human Body System**

Learners will discuss the various forms, functions and pathophysiology associated with body systems and alterations related to the normal aging process, obtain a health history, perform an evaluation of body systems and document using medical terminology.

**Outcome: 2.1. Human Body Form, Function and Pathophysiology**

Discuss the various human body systems, alterations related to the normal aging process and possible dysfunctions.

**Competencies**

2.1.2. Describe the cardiovascular system and trace the path of blood and factors affecting blood

flow.

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

2.1.4. Describe the function and components of the respiratory system and pulmonary ventilation

and factors influencing respiratory rates.

2.1.5. Describe nerve tissue and the nervous system, including regions of the brain and their function, the spinal nerves, signal transmission at synapses, and the sympathetic and parasympathetic system.

2.1.6. Describe the musculoskeletal system, including skeletal, cardiac and smooth muscle, various

bone structures and the role of bone marrow and joints and injuries.

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

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

**Outcome: 2.2. Evaluate Body Systems**

Use interviewing techniques, observation, auscultation, palpation and percussion to perform a systematic head‐to‐toe evaluation of the body systems and document using medical terminology.

**Competencies**

2.2.1. Provide privacy and demonstrate cultural sensitivity.

2.2.2. Contact interpretive services for non‐English speaking and English as a Second Language (ESL)

individuals.

2.2.3. Use age‐appropriate language to systematically review disease processes related to each body

system (e.g., vaccinations, allergies, reactions, history of abuse, history of suicidal ideation,

alcohol use, risk behaviors, stressors, sleep patterns, nutritional patterns, occupation, living

conditions, current medications, over‐the‐counter medications, herbals).

2.2.10. Perform pulmonary function testing (e.g., vital capacity, tidal volumes, total lung capacity).

2.2.12. Determine joint mobility and muscle strength (e.g., range‐of‐motion).

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

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| **Pathways** | X | Health Information Management | x | Medical Bioscience | X | Allied Health and Nursing | X | Exercise Science and Sports Medicine |
| **Green Practices** |  | Green-specific |  | Context-dependent |  | 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, and 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 the appropriate abbreviations and symbols to identify anatomical, physiological and pathological classifications and the associated medical specialties and procedures.

2.3.5. Use proper spelling and pronunciation of medical terms when communicating medical instructions and preparing medical documentations.

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

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

**Strand 3. Therapeutic Interventions**

Learners will administer or assist with environmental, health promotion, pharmacological, emergency, nutritional, exercise and rehabilitative and dental and surgical interventions and/or procedures to improve the individuals’ outcome and quality of life across the life span within their scope of practice, evaluate outcomes and ensure individual’s rights.

**Outcome: 3.1. Environmental Interventions**

Create and maintain a safe, sterile, efficient, age‐appropriate care environment.

**Competencies**

3.1.1. Use standard precaution guidelines, recommended by the Centers for Disease Control and

Prevention, for reducing the risk of transmission of blood‐borne and other pathogens.

3.1.2. Maintain patients’ rights, respect individual’s choices and describe informed consent.

3.1.3. Describe confidentiality guidelines in the Health Insurance Portability and Accountability Act

(HIPAA).

3.1.6. Identify and remove environmental and electrical hazards to decrease the risk of falls, injury,

or ingestion of dangerous materials (e.g., clutter, equipment, throw rugs, spills, plants,

3.1.17. Identify electrical, thermal and drowning risks in aquatic environments.

3.1.19. Control the level of distractions and noise.

3.1.20. Perform the safe operation, packing and cleaning of equipment.

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

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

**Outcome: 3.2. Health Promotion Interventions**

Identify and communicate health promotion and wellness to individuals, families and communities.

**Competencies**

3.2.1. Describe the national and state health agenda for wellness.

3.2.2 Identify skill related components (i.e., agility, balance, coordination, power, proprioception, speed and reaction time). *(Updated 1 September 2014)*

3.2.3 Measure and document an individual’s health-related components (i.e., cardiorespiratory fitness, muscular strength and endurance, endurance flexibility, body composition and power). *(Updated 1 September 2014)*

3.2.4. Identify the needs of the individual, family and community related to physical, biological,

technological, spiritual, religious, social and behavioral concepts.

3.2.5. Share information to promote, maintain and restore.

3.2.6. Communicate the importance of age‐appropriate healthy eating, exercise and preventative

medicine.

3.2.7. Communicate the medical benefits and risks associated with immunizations across the life

span.

3.2.8. Identify the components of wellness and communicate the relationship between physical

fitness, physical performance, injury prevention and nutritional intake.

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

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

**Outcome: 3.5. Nutritional Interventions**

Identify nutritional needs and communicate information to the individual and family member.

**Competencies**

3.5.2. Calculate the energy of carbohydrates, proteins and fats.

3.5.3. Describe ergogenic aids and possible benefits and risks.

3.5.4. Calculate caloric needs of the individual and refer the individual to nutritional resources for optimal health and performance.

3.5.5. Provide diet and hydration guidelines to maintain optimal health.

3.5.10. Take anthropometric measurements (e.g., weight, height, body mass index [BMI], body fat

percentage).

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

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

**Outcome: 3.6. Exercise and Rehabilitative Intervention**

Evaluate, define and perform training and therapies to enhance mobility and muscle strength and document.

**Competencies**

3.6.1. Complete a comprehensive fitness evaluation.

3.6.2. Evaluate kinesthetic awareness as related to functional movement.

3.6.3. Design and implement an individualized training program by using interval, continuous and

circuit training techniques.

3.6.4. Calculate the differences in caloric costs between various exercise protocols (e.g., cardio

versus resistance training, large versus small muscle groups).

3.6.5. Apply techniques to enhance neuromuscular flexibility (e.g., dynamic, static and proprioceptive neuromuscular facilitation [PNF]). *(Updated 1 September 2014)*

3.6.6. Apply techniques to enhance muscle strength, endurance and flexibility (e.g., isometric,

isotonic, isokinetic, aerobic, strength, power and flexibility training).

3.6.8. Use aquatic exercises for improvement of ROM, strength and cardiovascular benefits.

3.6.9. Modify physical activity to accommodate specific medical conditions and changes across the

life span (e.g., asthma, sickle cell, diabetes, osteoporosis, skeletal‐muscular disorders, age,

pregnancy).

3.6.14. Apply the FITT principle (i.e., frequency, intensity, time, type) to health and skill conditioning

activities.

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

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

**Strand 4. Assistive Care**

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

**Outcome: 4.1. Scope of Practice**

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

**Competencies**

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

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

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

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

**Outcome: 4.2. Therapeutic Communication and Interpersonal Skills**

Demonstrate communication techniques and behaviors when communicating with individuals and interacting with individuals with impairments and document.

**Competencies**

4.2.1. Describe non‐verbal communication, including gestures, posture, touch, facial expressions,

eye contact, body movements, avoidance and appearance.

4.2.2. Describe the importance of maintaining an individual’s personal space.

4.2.3. Describe the importance of empathy in interpersonal relationships and the need for kindness,

patience and listening.

4.2.8. Provide aids to facilitate communication for speech impaired individuals (e.g., picture cards,

slates, notepads).

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

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