Courses of Study
For
Health Careers Technology

Courses in the Allied Health and Nursing Pathway

Health Science and Technology (CTE) (072001)
Patient Centered Care (CTE) (072050)
Principles of Allied Health (CTE) (072035)
Medical Terminology (CTE) (072150)
Health Science Capstone (CTE) (072105)

CTPD 023

WEST SHORE CAREER -TECHNICAL DISTRICT
LAKEWOOD, OHIO 44107

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West Shore Career-Technical District

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Acknowledgements
Health Careers Technology
West Shore Career - Technical District

Sincere appreciation goes to the following individuals for their assistance and cooperation in preparing this Health Careers Technology program's course of study.

Lakewood Board of Education, Lakewood City Schools
Mr. Jeffrey Patterson, Superintendent, Lakewood City Schools
Mr. Keith Ahearn, Lakewood High School Principal
Mrs. Linda Thayer, Coordinator, West Shore Career and Technical
Mrs. Jacqueline Smith, Instructor, Health Careers Technology

And the Health Careers Technology Advisory Committee:

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O'Neal, David (Administrator, O'Neill Health Care)
Roelle, Laurel (current student, class 2015)
Thayer, Linda (Coordinator, West Shore CTE)
Zakrocki, Alina (RN, Infection Prevention, Lakewood Hospital)

For her helpful suggestions and encouragement: Donna Richmond, Retired Professor Kent State University

Recommendation of Advisory Committee
Health Careers Technology
West Shore Career & Technical District

The Career & Technical Advisory Committee of the Health Careers Technology Program, West Shore Career & Technical District, has reviewed this course of study and recommends it for use as the foundation for instruction in classroom, laboratory, and cooperative occupational experiences.

The developers of the course of study have considered local labor market needs and the school district's ability to offer specialized programs. The competencies found on the Allied Health and Nursing content standards for this program have been reviewed and accepted as being congruent with our school district's philosophy and student outcome measures.

We believe that this course of study adequately and correctly focuses upon the development of technical competencies, attitudes, values, and appreciation's critical to successful employment in the business realm.

After reviewing this document, we recommend that the Health Careers Technology Course of Study be approved and adopted on 5/15/16.
(Date)

Helen Kosko
William H. DiMascio
Alonzo Griffin
Joan Griffin
LYNN FORAN
Laurel Roelle
Lynn Barabach

Resolution
Health Careers Technology
West Shore Career & Technical District

WHEREAS, the Health Careers Technology Advisory Committee of the Lakewood City Schools has reviewed the Health Careers Technology Course of Study, and WHEREAS, the course of study is based upon the Career Content Standards Competencies for Allied Health and Nursing and courses:

Patient Centered Care (CTE) (072050)
Health Science and Technology (CTE) (072001)
Medical Terminology (CTE) (072150)
Principles of Allied Health (CTE) (072035)
Health Science Capstone (CTE) (072105)

WHEREAS, the Health Careers Technology Advisory Committee has reviewed these competencies and has edited competencies to address local labor market needs, and to acknowledge the school district's ability to offer specialized programs,

NOW, THEREFORE, BE IT RESOLVED, in accordance with the superintendent's recommendation, that the *Lakewood City Schools* adopt the Health Careers Technology Course of Study.

Approval date: 7/20/15

Superintendent

Board President

MISSION STATEMENTS
Health Careers Technology
WEST SHORE CAREER AND TECHNICAL EDUCATION DISTRICT

Mission of Lakewood City Schools

In partnership with our families and community, Lakewood City Schools will develop responsible citizens, who are critical and creative thinkers, committed to life-long learning, invested in a diverse society, and prepared for technological and global opportunities.

West Shore Career Technical District Mission Statement

The many enhancements to the West Shore Career-Technical District facility, technology, and curriculum support the ongoing mission of our teachers, administration, and staff to provide excellent educational opportunities and meaningful real-world experiences while preparing students for success in the global marketplace of the 21st century.

CAREER AND TECHNICAL EDUCATION GOALS
Health Careers Technology
WEST SHORE CAREER AND TECHNICAL EDUCATION DISTRICT

- Offer relevant, hands-on learning opportunities which align with student career interests and regional workforce development needs
- Prepare career-tech student for post-secondary opportunities or to directly enter the workforce.
- Maintain active advisory committees which offer overall curriculum direction and specific occupational knowledge of competencies required for each industry specific committee
- Offer career exploration opportunities to expose students to career
- Upgrade career-technical labs to align with industry standards
- Provide on-going industry training and development opportunities for career-tech staff to stay abreast of industry advancements and teaching methods.

PROGRAM DESIGN
Health Careers Technology
WESTSHORE CAREER AND TECHNICAL EDUCATION DISTRICT

PROGRAM PHILOSOPHY:

We believe the demands of modern society and the needs and interest of our youth necessitate an educational program designed to prepare students for productive citizenship in the world of work. It is our belief that students should be actively engaged in hands on experiences and connected to real world applications.

We believe the Health Careers Technology program is essential in order to help address the increased demand for trained health care workers in today's market. The program aims to foster, through technical instruction, patient care experiences and integrated academics, fully functioning individuals who possess employability and reasoning skills, as well as technical expertise.

We believe that the skills developed in the Health Careers Technology program provide the student with a positive outlook and attitude about themselves, the workplace and society. We believe that as one develops personal, employability and technical skills, they also develop an appreciation for the needs of society, problem solving abilities, pride in accomplishment and desire for life-long learning.

PROGRAM GOALS:

Students prepare for entry level jobs in the health care field and for further education and advancement in their field of interest. The objectives are:

- To transition from high school to continued education in a college program and to foster a belief in life-long learning.
- To utilize academic along with technical knowledge in the classroom, lab and work-based learning environment.
- To solve problems, use observation skills and make decisions in a work-related situation.
- To demonstrate safety and infection control practices at all times.
- To demonstrate teamwork, leadership and the ability to interact positively with others and participate in the career tech student organization.
- To demonstrate the traits of a good work ethic in the classroom, at work sites and at home.
- To utilize appropriate strategies for dealing with the differences associated with diversity (e.g. racial, ethnic, gender, educational, personality, social and age).
- To comply with the confidentiality requirements of workplace policies and procedures.
- To exhibit professionalism, practice ethical behavior, understand legal responsibilities, and recognize and uphold patients' rights.

- To acquire American Heart Association certification in Adult/Infant CPR, AED and First Aid.
- To develop respect for other persons and their property, be able to live and work cooperatively with others and become a responsible citizen in society.
- To develop pride in work and chosen occupation.
- To strive for a 95% attendance rate and grade of "B" throughout the program
- To receive a Career Passport

Overview of Program

The Health Careers Technology program at Lakewood High School is a two-year program comprised of 5 individual courses:

Patient Centered Care
Health Science and Technology
Medical Terminology
Principles of Allied Health
Health Science Capstone

The program is designed to begin in the 11th grade for students who have a strong desire to learn and work in a patient care setting and are likely to pursue post-secondary education upon graduation. The program explores a broad range of health related careers while providing the specific training for the State Tested Nurse Aide (STNA) competency exam. Success on the exam earns an industry credential and can lead to successful employment at the end of the junior year. During the STNA training, students are taught the skills and competencies to care for patients in hospital and long term care facilities. In conjunction with this training, students learn anatomy and physiology, medical terminology, pathology (disease), first-aid, CPR and other medical procedures.

Students are encouraged to take the proper classes so that they are prepared for their next step in their educational careers. The following pathway chart is a recommended sequence for students interested in the Allied Health and Nursing career field:

Ohio Department of Education

2015-2016 Program of Study

Ohio Career-Technical Education

School District Name: Lakewood City SD

School Building: Lakewood High School

Postsecondary Name:

Postsecondary Campus:

Career Pathway: JM Allied Health and Nursing

Secondary Program Name: Health Careers - Nursing

Postsecondary Program Name:

Courses with Secondary and Postsecondary Credits

Secondary	9	English 9 (RA)	Health (RA)	Physical Education (RA)	Algebra 1(RA)	Computer Science (RE)	Biology (RA)	Foreign Language (RE)		Secondary
	10	English 10 (RA)	World History (RA)	Fine Art (RA)	Geometry (RA)	Elective (RE)	Physical Science (RA)	Foreign Language (RE)		
	11	English 11 (RA)	US History (RA)	Computer Programming (RE)	Physics (RA)	Health Science and Technology (CTE)	Life Science(RA)	Patient Centered Care (CTE)	Principles of Allied Health (CTE)	
	12	English 12 (RA)	Government (RA)	Social Studies Elective (RE)	Chemistry (RA)	Medical Terminology (CTE)	Physics (RA)	Health Science Capstone (CTE)		
Postsecondary	Year 1 1st Sem									Postsecondary
	Year 1 2nd Sem									
	Year 2 1st Sem									
	2									

In the 9th, 10th and 11th grade components of the Tech Prep program, all students are part of a seamless curriculum, which allows student to transition into post-secondary programs. Each competency and competency builder in the required curriculum is designated to be introduced, reinforced, or mastered at various levels.

Population Served

The Health Careers Technology program is open to all 11th grade students at Lakewood High School, and the West Shore CTE District schools we serve who meet the following criteria:

- A strong desire to work in the health care field
- GPA of 2.5 or higher (strongly advised)
- Completed Algebra 1 and Biology with a "C" or better
- Passed all components of OGT
- Demonstration of excellent attendance by less than 10 tardies and less than 10 absences in the previous school year
- Student is not a safety hazard to self or others, with no disciplinary actions or suspensions
- Have transportation available (private or public) to them in the senior year in order to visit work-based learning sites
- Application and interview with the instructor to discuss the above criteria

Housing of the Program

- Classroom and laboratory are located off-site in the Lakewood Professional Building, 14600 Detroit Ave (corner of Belle & Detroit)
- Fieldtrips provide learning experiences outside the classroom, i.e. college campuses, science labs, and community service projects.
- Partnerships with local health care facilities provide additional hands-on training opportunities through clinical experience with patient care

Supervisor of the Program

The teacher of the Health Careers Technology program reports directly to the West Shore Career and Technical Director.

Occupations Addressed

High School Exit Careers	Associate Degree Careers	Bachelor's Degree Careers
State Tested Nurse Aide	Licensed Practical Nurse	Physician Assistant
Certified Nurse Aide	Dental Assistant	Physical Therapist
Patient Care Technician	Dental Hygienist	Radiation Therapist
Dietary Aide	Respiratory Therapy Technician	Registered Nurse (BSN)
Home Health Aide	Physical Therapist Assistant	Occupational Therapist
Health Care Assistant	Emergency Medical Technician	Speech-Language Pathologist
	Paramedic	Respiratory Therapist
	Registered Nurse (ADN)	Registered Dietitian
	...and others	Athletic Trainer
		...and many others

Professional careers with education beyond a Bachelor's Degree include:

Dentist	Physician
Physical Therapist	Nurse Practitioner
Optometrist	Ophthalmologist
Chiropractor	Veterinarian
Exercise Physiologist	...and many others

Basic Program Operation

The program provides classroom instruction and laboratory experiences in and out of the school setting (included are local health care facilities). It develops academic and technical knowledge, competency in basic healthcare skills with hands on experience, professional ethics, leadership qualities, positive attitudes and employability skills.

In the junior year, class is held the last three periods of the day (120 minutes), 5 days per week. Students will be transported by bus to the classroom from the high school. Each day, time

is spent on related material and lab performance in varying proportions depending on the subject matter. A variety of teaching methods will be used incorporating lecture, discussion, games, activities, group work, technology and work based learning. The STNA training program usually begins in the 2nd grading period and last approximately 12 weeks.

In the senior year of the program, class is held the first 3 periods of the day (120 minutes), 5 days per week. Students report to the classroom by 8am and are transported by bus to the high school for the rest of their scheduled classes. The focus of the senior year is refinement of patient care skills, concentrated study of diseases, continuing medical terminology and anatomy & physiology, introduction into medical ethics, further career exploration through field experiences, and extensive preparation for transition into industry or college based education.

Field Experience

Field experience, or work based learning, includes supervised in-school laboratory and out-of-school occupational placement experiences. The instructor uses students, parents, community leaders, and facility staff and administrators to assist in planning these experiences. The instructor supervises the students and keeps appropriate records of the experiences and competencies achieved in each area. Some examples may include job shadowing, hospital rotations, site visits and community service projects.

Articulation Agreements

Articulation agreements have been developed between West Shore Career and Technical District and Cuyahoga Community College. There is on-going dialogue following the established process and procedures between our school and each participating post-secondary institution to develop and maintain articulation agreements. The procedure can include post-secondary options, waiver of classes or other formats providing time-shortened or advanced skill associate degree paths.
The Health Careers Technology program is a Tech Prep program with articulated college credits through Cuyahoga Community College. Opportunities for advancement and transition into health related programs are provided. College credits can be awarded in Medical Terminology and Medical Ethics once the criteria have been satisfied. The details of the agreement are on file with the program supervisor.

Technology

Technology is an integral part of the Health Careers Technology program. Computer hardware and software are maintained as state-of-the-art instructional delivery of curriculum through technology is the norm for this class.
Knowledge and use of technology are essential skills needed to succeed in our modern society. This program attempts to utilize and incorporate technology whenever possible. As an adjunct to traditional teaching methods, software programs are used to teach medical terminology and other core health topics. This alternate teaching method is also commonplace in the college setting. Most hospital systems use electronic charting and databases. Students will be exposed to the use of technology in these systems and learn the need for adaptability. In addition, students will need access to a computer outside of class for a variety of research assignments, activities, and review of class material.

Integrated Academics

Academics are taught outside the CTE program by a licensed teacher, however, is integrated as part of this program in order to raise standards. Math, Science, English and Communications skills are essential and integral parts of the program competencies.

By integrating academic and technical instruction, students are better prepared to enter the workforce and transition into continued education. Students enrolled in Tech Prep programs have the opportunity to acquire college credits while in high school at no additional cost. These credits can be obtained in the areas of Medical Terminology and Medical Ethics based on our current articulation agreement with Cuyahoga Community College.

Student Leadership

It is anticipated that students will:

- develop study habits commensurate with the workload
- maintain workbooks and supplemental materials throughout each year
- understand that course requirements occasionally demand that students work in groups, and that the success of the group equates to the lowest common denominator

In addition, students are preparing for a career that relies heavily on teamwork. Emphasis is placed on working with partners and supporting classmates in their skill performance.

Critical Thinking and Decision Making

Developing the use of critical thinking skills to make prudent decisions is a central part of classroom instruction, laboratory activities, skill performance and ultimately in the care of the patient. Decision making techniques are taught through the problem solving approach and with simulated situations in the lab setting. The students learn to identify options, select and test the options, and determine the solution or conclusion.

Statement of Modifications

Significant academic accommodations and/or modifications of competency to the Health Careers Technology curriculum may limit or prevent successful training and/or future employment options in this area. Also accommodations and/or modification necessary for physical limitations and/or social work behaviors may also limit or prevent successful training and/or future employment options in this area.

Disclaimer Statement

This Course of Study conforms to all federal, state and local laws and regulations including Title IX and non-discrimination against any student because of race, color, creed, sex, religion, citizenship, economic status, married status, pregnancy, handicap, other physical characteristics, age or national origin. This policy of nondiscrimination shall also apply to otherwise qualify handicapped individuals.

Scope and Sequence

Health Science Technology (072001)

West Shore Career-Technical District

Course Description:
This first course in the career field provides students an overview of the opportunities available in the healthcare industry. Students will learn fundamental skills in effective and safe patient care that can be applied across a person's lifespan. They will also be introduced to exercise science and sports medicine, the field of biomedical research and the importance of managing health information.

In addition, this course incorporates the standards and guidelines from Ohio Department of Health curriculum for the Nurse Aide Training and Competency Evaluation Program (NATCEP) as indicated throughout. Please reference the NATCEP curriculum in its entirety in the appendix. A list of topics and standards is given below:

Chapter 3701-18 of the OAC for the State of Ohio establishes the requirements for Ohio's Nurse Aide Training and Competency Evaluation Program (NATCEP). These requirements mandate, that as of Jan. 1, 1990, all NAs working on a regular basis in Ohio's LTCFs must complete a 75-hour TCEP and pass a competency evaluation test conducted by the director. The objective of this NA training and competency evaluation requirement is the provision of quality services to residents in LTCFs by NAs who are able to:

1. Form relationships, communicate and interact competently on a one-to-one basis with LTCF residents as part of the team implementing resident care objectives;
2. Demonstrate sensitivity to the residents' physical, emotional, social and mental health needs through trained, directed interactions;
3. Assist residents in attaining and maintaining functional independence;
4. Exhibit behavior in support and promotion of residents' rights; and
5. Demonstrate observation and documentation skills needed in support of the assessment of the long-term care residents' health, physical condition and well-being.

Organization of the Standards, Objectives and Content

The topic areas are broken up into standards. Below is an outline of the topic areas with each standard that is contained within. The language at the beginning of each standard specifically outlines the State of Ohio requirements that must be contained in or addressed through the TCEP. The objectives specify in behavioral terms what the trainees in the TCEP are expected to be able to do as a result of successfully completing the TCEP. Each TCEP may enhance the content by using textbooks, handouts and audiovisual materials.

Topic Area I – Introduction to TCEP
Standard I.1 Program Overview

Topic Area II – Communication and Interpersonal Skills
Standard II.1 Work Environment
Standard II.2 Role and Responsibility of the Nurse Aide
Standard II.3 Policy and Procedure Manuals
Standard II.4 Behavior and Appearance
Standard II.5 Communication and Interpersonal Skills
Standard II.6 Communicating and Interacting with Residents with Impairments
Standard II.7 Resident Comprehensive Assessment, Care Plan and Care Conference
Standard II.8 Legal Responsibilities
Standard II.9 Medical Records
Topic Area III – Infection Control
Standard III.1 Infection Control
Standard III.2 Practices that Prevent the Growth and Spread of Pathogenic Microorganisms
Standard III.3 Signs and Symptoms of Infection
Topic Area IV – Safety and Emergency Procedures
Standard IV.1 General Safety Practices and Procedures
Standard IV.2 The Use of Oxygen and Oxygen Equipment and Safety Procedures
Standard IV.3 Fire Prevention and Procedures to Follow in Case of a Fire Disaster
Standard IV.4 Natural Disaster Preparedness
Standard IV.5 Principles of Ergonomics, Body Mechanics and Body Alignment
Standard IV.6 Alternatives to Restraints and Safe Restraint Use
Standard IV.7 Mobility and Ambulation Techniques
Topic Area V – Promoting Residents' Independence
Standard V.1 Promoting the Residents' Independence
Topic Area VI – Respecting Residents' Rights
Standard VI.1 The Resident's Rights
Topic Area VII – Basic Nursing Skills
Standard VII.1 Observational Skills
Standard VII.2 Recognizing Changes in Body Functioning
Standard VII.3 Recognizing Signs and Symptoms of Common Diseases
Standard VII.4 The Long-term Care Facility as Home
Standard VII.5 Bed-making Techniques and Comfort Measures
Standard VII.6 Admission and Discharge
Standard VII.7 Mealtime
Standard VII.8 Nutrition and Fluid Needs
Standard VII.9 Height and Weight
Standard VII.10 Observing and Measuring Vital Signs
Topic Area VIII – Personal Care Skills
Standard VIII.1 Oral Hygiene
Standard VIII.2 Bathing
Standard VIII.3 Additional Personal Care Skills
Standard VIII.4 Special Skin Care
Standard VIII.5 Urinary Elimination/Catheters
Standard VIII.6 Toileting
Standard VIII.7 Intake and Output
Standard VIII.8 Bowel Elimination

Topic Area IX – Mental Health and Social Service Needs
Standard IX.1 Basic Facts and Misconceptions about the Elderly
Standard IX.2 Meeting the Basic Emotional Needs of Residents
Standard IX.3 Rest and Sleep
Standard IX.4 Sexuality in Aging
Standard IX.5 Special Needs Populations
Standard IX.6 Care of the Confused Resident
Standard IX.7 Care of the Resident with Depression
Standard IX.8 Care of the Dying Resident

Scope and Sequence
Health Science and Technology (072001)
West Shore Career-Technical District

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
***Correlates to NATCEP Topic Area II – Communication and Interpersonal Skills, Standards II.1, II.2, II.4**

I Can… 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.

Outcome 1.2. Leadership and Communications
***Correlates to NATCEP Topic Area II – Communication and Interpersonal Skills, Standards II.5, II.6**

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

Competencies

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.
1.2.9. 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.

Outcome 1.3. Business Ethics and Law
***Correlates to NATCEP Topic Area II – Communication and Interpersonal Skills, Standard II.3**

I Can... Analyze how professional, ethical and legal behavior contributes to continuous improvement in organizational performance and regulatory compliance.

Competencies

1.3.1. Analyze how regulatory compliance affects business operations and organizational performance.
1.3.2. Follow protocols and practices necessary to maintain a clean, safe and healthy work environment.
1.3.3. Use ethical character traits consistent with workplace standards (e.g., honesty, personal integrity, compassion, justice).
1.3.7. Identify the labor and practice laws that affect employment and the consequences of noncompliance for both employee and employer (e.g., harassment, labor, employment, employment interview, testing, minor labor laws, Americans with Disabilities Act, Fair Labor Standards Acts, Equal Employment Opportunity Commission [EEOC], human trafficking) and interpret personal safety rights according to the employee Right to Know Plan.
1.3.8. Verify compliance with computer and intellectual property laws and regulations.

Outcome 1.4. Knowledge Management and Information Technology
***Correlates to NATCEP Topic Area II – Communication and Interpersonal Skills, Standard II.9**

I Can... Demonstrate current and emerging strategies and technologies used to collect, analyze, record and share information in business operations.

Competencies

1.4.3. Verify compliance with security rules, regulations and codes (e.g., property, privacy, access, accuracy issues, client and patient record confidentiality) pertaining to technology specific to the industry pathway.
1.4.7. Use personal information management and productivity applications to optimize assigned tasks (e.g., lists, calendars, address books).
1.4.8. Use electronic media to communicate and follow network etiquette guidelines.

Outcome 1.5. Global Environment

I Can... Evaluate how beliefs, values, attitudes and behaviors influence organizational strategies and goals.

Competencies

1.5.1. Describe how cultural understanding, cultural intelligence skills and continual awareness are interdependent.
1.5.2. Describe how cultural intelligence skills influence the overall success and survival of an organization.
1.5.3. Use cultural intelligence to interact with individuals from diverse cultural settings.
1.5.4. Recognize barriers in cross□cultural relationships and implement behavioral adjustments.
1.5.5. Recognize the ways in which bias and discrimination may influence productivity and profitability.
1.5.6. Analyze work tasks for understanding and interpretation from a different cultural perspective.
1.5.7. Use intercultural communication skills to exchange ideas and create meaning.
1.5.8. Identify how multicultural teaming and globalization can foster development of new and improved products and services and recognition of new opportunities.

Outcome 1.6. Business Literacy

I Can... Develop foundational skills and knowledge in entrepreneurship, financial literacy and business operations.

Competencies

1.6.5. Describe organizational structure, chain of command, the roles and responsibilities of the organizational departments and interdepartmental interactions (e.g., following physician's orders).

1.6.9. Explain how the performance of an employee, a department and an organization is assessed.

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.

***All outcomes correlate to NATCEP Topic Area VII – Basic Nursing Skills, Standards VII.1 – VII.3**

Outcome 2.1. Human Body Form, Function and Pathophysiology

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

Competencies

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

2.1.15. Explain the pathophysiology changes associated with or resulting from disease or injury.

Outcome 2.2. Evaluate Body Systems

I Can... 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.

Outcome 2.3. Medical Terminology

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

Competencies

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.

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
***Correlates to NATCEP Topic Area IV – Safety and Emergency Procedures, Standards IV.1, IV.2, IV.4**

I Can... 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.

3.1.3. 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, hazardous chemicals).

3.1.7. Demonstrate chemical and electrical safety and their application to the work environment.

3.1.8. Determine the risk of burns resulting from equipment, liquids, chemicals and fire.

3.1.9. Describe and follow the precautions used in oxygen therapy and pressurized gases.

3.1.10. Clean, store, or dispose of supplies, specimens and laboratory glassware following protocol and standard precautions.

3.1.12. Implement disaster preparedness response to fire, tornado, emergency evacuation, hazardous material spill, infant/child abduction, bomb threat, violent person, active shooter, missing adult and loss of power.

3.1.13. Identify risk factors of exposure to hazardous materials (i.e., chemical, radiologic, microbial) and provide safety precautions.

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

Outcome 3.2. Health Promotion Interventions

I Can... 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.
3.2.5. 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.

Outcome 3.3. Pharmaceutical Interventions.

I Can... Prepare, administer, store and document medications, 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.

Outcome 3.5. Nutritional Interventions.
***Correlates to NATCEP Topic Area VII – Basic Nursing Skills, Standards VII.7-8**

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

Competencies

3.5.1. Describe the role and effects of carbohydrates, proteins, fats, electrolytes, minerals, vitamins and water in different body systems and life processes.
3.5.5. Provide diet and hydration guidelines to maintain optimal health.
3.5.7. Describe types of allergic reactions to foods and food intolerances.
3.5.8. Describe regional, cultural and religious food preferences.

Outcome 3.7. Dental Interventions

I Can... Assist in the application of dental and oral interventions and document with dental terminology and symbols.

Competencies

3.7.1. Explain the relationship between oral health and nutritional factors related to dentistry.
3.7.2. Summarize the uses and effects of tobacco, caffeine, alcohol, marijuana, cocaine and methamphetamines on the oral cavity and teeth.
3.7.3. Compare and contrast various specialties in dentistry (e.g., endodontic, periodontal, oral surgery, orthodontics, prosthodontics).
3.7.12. Compare and contrast common procedures and equipment used in pediatric and adult dentistry.

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
***Correlates to NATCEP Topic Area II – Communication and Interpersonal Skills, Standards II.1, II.7, II.8**

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

Competencies

4.1.1. Describe the guidelines of the governing body concerning abuse, mistreatment, neglect and misappropriation of an individual's property.
4.1.4. Describe the primary purpose of healthcare settings (e.g., long□term care facility [LTCF], acute care, home health).
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.

Outcome 4.2. Therapeutic Communication and Interpersonal Skills
***Correlates to NATCEP Topic Area II – Communication and Interpersonal Skills, Standards II.5 – II.6**

I Can... 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.
4.2.3. Describe the importance of empathy in interpersonal relationships and the need for kindness, patience and listening.

Outcome 4.3. Microorganisms, Infection Control and Infection
***Correlates to NATCEP Topic Area III – Infections Control, Standards III.1 – III.2**

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

Competencies

4.3.1. Describe the chain of infection (e.g., host, vectors, portal of entry).
4.3.2. Describe mechanisms for the spread of infection, including airborne, vector□borne, common vehicle, droplet and contact.
4.3.3. Describe methods of controlling or eliminating microorganisms and the importance of practices that hinder the spread of infection (e.g., hand washing, disinfecting care areas).

Outcome 4.8. End of Life Care
***Correlates to NATCEP Topic Area IX – Mental Health and Social Service Needs, Standard IX.8**

I Can... Provide physical, emotional and spiritual support to individuals and families at end of life.

Competencies

4.8.1. Describe variations in advanced directives and responsibilities of healthcare providers.
4.8.2. Identify stages of reaction to death and dying (e.g., denial, anger, bargaining, depression, acceptance).
4.8.3. Describe the goal of palliative care and hospice.

Strand 5. Bioscience Research and Development
Learners will demonstrate the skills and knowledge of interpreting laboratory requests, using protective clothing and hazardous material containment, specimen collection procedures, a variety of laboratory testing and techniques and maintenance of laboratory equipment and supplies.

Outcome 5.9. Clinical Laboratory Techniques and Procedures

I Can... Perform and interpret clinical laboratory techniques and procedures.

Competencies

5.9.3. Differentiate between aseptic and sterile procedures when collecting specimens and maintain bio□hazardous materials procedures (e.g., urine, feces, sputum, blood).

5.9.10. Identify complications of venipuncture (e.g., patient fainting, short draw, inadequate inversion, hemolysis, lack of blood flow, hematoma, petechia, nerve injury, mastectomy issues).
5.9.14. Identify major routine tests performed in clinical lab sections (e.g., blood bank, chemistry, hematology, serology, microbiology, urinalysis).

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

I Can... 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.
6.1.3. Describe the architecture and data standards of health information systems.
6.1.4. Describe the principles of structure, design and use of health information (e.g., individual, comparative, reports, trended data).
6.1.8. Describe health record documentation requirements of external agencies and organizations.(e.g., those specified by accrediting bodies, regulatory bodies, professional review organizations, licensure, reimbursement, discipline□specific "good practice").
6.1.9. Describe typical internal organizational health record documentation requirements, policies and procedures.
6.1.10. Explain how to apply policies and procedures to ensure organizational compliance with regulations and standards, including Medicare and Medicaid.

Outcome 6.2. Confidentiality, Privacy and Security

I Can... Apply the fundamentals of confidentiality, privacy and security to communicate and health/medical information accurately and within legal/regulatory bounds across the organization between organizations.

Competencies

6.2.1. Identify components of the court systems and distinguish between public and private law, civil and criminal law and tort, contract actions and the trial process.
6.2.2. Differentiate between types of evidence used in healthcare litigation, process of discovery and the permissible use of evidence in litigation, recognizing the elements of negligence and medical malpractice.

6.2.3. Explain and interpret regulatory requirements, standards of practice, legal responsibility, limitations and implications of actions and describe the appropriate avenues for reporting incidences of malpractice or negligence.

6.2.8. Describe the possible consequences of inappropriate use of health data in terms of disciplinary action.

6.2.11. Compare and contrast the relevance of federal, state and private sector initiatives related to the privacy, security and confidentiality of health information technology.

Scope and Sequence

Patient Centered Care (072050)

West Shore Career-Technical District

Course Description:
Students will apply psychomotor nursing skills needed to assist individuals in meeting basic human needs. Students will implement interventions following a nursing assistant plan of care. Students will collect patient's vital signs including temperature, pulse rate, respiration rate, and blood pressure. Students will perform phlebotomy procedures with emphasis on infection prevention, universal precautions, proper patient identification, specimen acquisition, handling, and processing. Additionally, students will observe patients' physical, mental, and emotional conditions and document any change.

In addition, this course incorporates the standards and guidelines from Ohio Department of Health curriculum for the Nurse Aide Training and Competency Evaluation Program (NATCEP) as indicated throughout. Please reference the NATCEP curriculum in its entirety in the appendix.

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

I Can... 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.

Outcome: 1.2. Leadership and Communications

I Can... 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 resumés.

Outcome: 1.3. Business Ethics and Law

I Can... Analyze how professional, ethical and legal behavior contributes to continuous improvement in organizational performance and regulatory compliance.

Competencies

1.3.2. Follow protocols and practices necessary to maintain a clean, safe and healthy work environment.
1.3.3. Use ethical character traits consistent with workplace standards (e.g., honesty, personal integrity, compassion, justice).
1.3.7. Identify the labor and practice laws that affect employment and the consequences of non-compliance for both employee and employer (e.g., harassment, labor, employment, employment interview, testing, minor labor laws, Americans with Disabilities Act, Fair Labor Standards Acts, Equal Employment Opportunity Commission [EEOC], human trafficking) and interpret personal safety rights according to the employee Right-to□Know Plan.
1.3.8. Verify compliance with computer and intellectual property laws and regulations.
1.3.9. Identify potential conflicts of interest (e.g., personal gain, project bidding) between personal, organizational and professional ethical standards.

Outcome: 1.4. Knowledge Management and Information Technology

I Can... Demonstrate current and emerging strategies and technologies used to collect, analyze, record and share information in business operations.

Competencies

1.4.1. Use office equipment to communicate (e.g., phone, radio equipment, fax machine, scanner, public address systems).

1.4.3. Verify compliance with security rules, regulations and codes (e.g., property, privacy, access, accuracy issues, client and patient record confidentiality) pertaining to technology specific to the industry pathway.

1.4.7. Use personal information management and productivity applications to optimize assigned tasks (e.g., lists, calendars, address books).

Outcome: 1.5. Global Environment

I Can... Evaluate how beliefs, values, attitudes and behaviors influence organizational strategies and goals.

Competencies

1.5.1. Describe how cultural understanding, cultural intelligence skills and continual awareness are interdependent.

1.5.3. Use cultural intelligence to interact with individuals from diverse cultural settings.

1.5.4. Recognize barriers in cross□cultural relationships and implement behavioral adjustments.

1.5.5. Recognize the ways in which bias and discrimination may influence productivity and profitability.

Outcome: 1.6. Business Literacy

I Can... Develop foundational skills and knowledge in entrepreneurship, financial literacy and business operations.

Competencies

1.6.9. Explain how the performance of an employee, a department and an organization is assessed.

1.6.11. Describe how all business activities of an organization work within the parameters of a budget.

1.6.12. Describe classifications of employee benefits, rights, deductions and compensations.

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

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

Competencies

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

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.

2.1.7. Describe the gastrointestinal system, including structures of chewing, swallowing, digestion and elimination and the role of accessory organs including the liver, pancreas and gallbladder.

2.1.8. Describe the urinary system structures and principles of glomerular filtration, electrolyte exchanges and their role in the production of red blood cells and the control of blood pressure.

2.1.9. Describe the immune system and the lymphatic system's role in immunity.

2.1.10. Describe the sensory system, related structures and functions.

2.1.11. Describe the endocrine system, its structures and the role of hormones.

2.1.12. Differentiate between the male and female reproductive system, structures and function.

2.1.13. Describe the integumentary system, related structures and functions.

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

2.1.15. Explain the pathophysiology changes associated with or resulting from disease or injury.

Outcome 2.2. Evaluate Body Systems

I Can... 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).
2.2.4. Perform vital signs.
2.2.5. Determine level of consciousness and cognition.
2.2.6. Determine pupil reactivity and accommodation.
2.2.7. Determine site, onset, type, quality and level of pain.
2.2.8. Determine what decreases and increases the pain experience.
2.2.9. Auscultate lungs for abnormal breath sounds.
2.2.10. Perform pulmonary function testing (e.g., vital capacity, tidal volumes, total lung capacity).
2.2.11. Auscultate bowel sounds and palpate abdomen for distention and tautness.
2.2.12. Determine joint mobility and muscle strength (e.g., range□of□motion).
2.2.13. Identify open wounds, skin abrasions, decubitus and rashes.
2.2.14. Observe for excessive body fluid loss (i.e., blood loss, diarrhea, vomiting, profuse diaphoresis).
2.2.15. Identify symptoms of substance abuse.
2.2.16. Identify patterns of behavior to determine risk to self and others.

Outcome 2.3. Medical Terminology

I Can... 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).
2.3.3. 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.

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

I Can... 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 obtain informed consent.

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

3.1.4. Decrease the risk of injury and elopement to the individual or others (e.g., by using restraints, alarms, bedrails, hi□low beds, padding, non□slip footwear and hand rails).

3.1.5. Identify and respond to emergency call lights and alarms.

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, hazardous chemicals).

3.1.7. Demonstrate chemical and electrical safety and their application to the work environment.

3.1.11. Determine risk of bleeding and implement precautions

3.1.12. Implement disaster preparedness response to fire, tornado, emergency evacuation, hazardous material spill, infant/child abduction, bomb threat, violent person, active shooter, missing adult and loss of power.

3.1.13. Identify risk factors of exposure to hazardous materials (i.e., chemical, radiologic, microbial) and provide safety precautions.

3.1.14. Apply principles of asepsis and sterile techniques and determine recommended use of germicides (e.g., sterilant, disinfectant, antiseptic).

3.1.15. Follow Standard Operational Protocols (SOP's) for exposure and disposal of tissue cultures, contaminated materials, body fluids and radioisotopes and place sharps in biohazard containers.

3.1.16. Use proper body mechanics to perform therapeutic interventions.

Outcome 3.2. Health Promotion Interventions

I Can... 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.
3.2.4. 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.
3.2.7. Communicate the medical benefits and risks associated with immunizations across the life span.

Outcome 3.4. Emergency Interventions

I Can... Respond to emergencies and natural disasters by performing emergency interventions and proper documentation.

Competencies

3.4.1. Perform cardiopulmonary resuscitation (CPR), first□aid and automated external defibrillation (AED).
3.4.2. Control hemorrhage.
3.4.3. Recognize and respond to anaphylactic shock.

Outcome 3.5. Nutritional Interventions

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

Competencies

3.5.1. Describe the role and effects of carbohydrates, proteins, fats, electrolytes, minerals, vitamins and water in different body systems and life processes.
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.
3.5.6. Describe which drugs interact with certain foods.
3.5.7. Describe types of allergic reactions to foods and food intolerances.
3.5.8. Describe regional, cultural and religious food preferences.
3.5.9. Monitor intake and output when medically indicated.

Outcome 3.6. Exercise and Rehabilitative Intervention

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

Competencies

3.6.7. Perform active, passive, assistive and resistive Range of Motion (ROM) on joints.
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).
3.6.10. Fit ambulatory aids and perform gait training.
3.6.11. Apply protective taping, wrapping, padding and protective equipment to upper and lower extremities.
3.6.13. Apply evidence based therapeutic modalities (e.g., cryotherapy, thermotherapy, hydrotherapy, light therapy, electrotherapy).

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

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

Competencies

4.1.2. Inform the supervisor of any changes in the individual's condition.
4.1.3. Provide input to and work within an age appropriate plan of care developed by the interdisciplinary team for each individual.
4.1.4. Describe the primary purpose of healthcare settings (e.g., long term care facility [LTCF], acute care, home health).
4.1.5. Identify the medical specialists who treat disorders of each body system.

Outcome 4.2. Therapeutic Communication and Interpersonal Skills

I Can... 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.
4.2.4. Maintain aids that promote oral, auditory and visual health (e.g., eye glasses, hearing aids, dentures).
4.2.5. Arrange food and utensils on the meal tray in a clock fashion for visually impaired individuals.
4.2.6. Position an individual for meals to avoid choking and assist in feeding.
4.2.7. Maintain a proper environment for eating (e.g., noxious odors, contaminated items, loud noises).
4.2.8. Provide aids to facilitate communication for speech impaired individuals (e.g., picture cards, slates, notepads).

Outcome 4.3. Pathogenic Microorganisms, Infection Control and Infection

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

Competencies

4.3.1. Describe the chain of infection (e.g., host, vectors, portal of entry).
4.3.2. Describe mechanisms for the spread of infection, including airborne, vector□borne, common vehicle, droplet and contact.
4.3.3. Describe methods of controlling or eliminating microorganisms and the importance of practices that hinder the spread of infection (e.g., hand washing, disinfecting care areas).
4.3.4. Use personal protective equipment (PPE) when encountering body fluids, potential of splashing, or respiratory droplets.
4.3.5. Demonstrate various decontamination techniques and procedures.
4.3.6. Demonstrate precaution guidelines.
4.3.7. Maintain isolation precautions.
4.3.8. Identify signs and symptoms of infection (e.g., fever, confusion, areas of redness, swelling, pain).

Outcome 4.4. Hygiene

I Can... Perform personal hygiene for individuals across the life span and document.

Competencies

4.4.1. Perform oral and denture care.
4.4.2. Perform personal hygiene (e.g., bathing, perineal care, shaving, shampooing).
4.4.3. Assist or dress and undress impaired individuals.
4.4.4. Perform nail care, foot soaks and observe skin for reddened or discolored areas and abnormalities.
4.4.5. Observe and report skin condition over boney prominences.

Outcome 4.5. Ambulation and Mobility

I Can... Assist in the safe ambulation and mobility of individuals across the life span continuum and document.

Competencies

4.5.1. Describe risks of immobilization and take measures (e.g., apply anti□embolic stockings, breathing, turning) to prevent complications.
4.5.2. Apply assistive devices based on individual needs.
4.5.3. Operate wheelchairs, Geri Chairs and lifts.
4.5.4. Prepare an individual for ambulation with skid□proof footwear, use gait belt and encourage the individual to use assistive devices.
4.5.5. Demonstrate ambulation techniques for the use of walkers, crutches and canes.
4.5.6. Reposition slowly to avoid postural hypotension.
4.5.7. Support the individual on the affected side of the body to prevent falls or injury.
4.5.8. Position the individual in bed for comfort, to maintain proper body alignment and to decrease pressure on boney prominences.

Outcome 4.6. Elimination

I Can... Assist with elimination needs across the life span continuum and document.

Competencies

4.6.1. Describe changes in elimination related to the aging process.
4.6.2. Measure intake and output.
4.6.3. Describe the importance of and develop a toileting schedule to maintain the individual's dignity, prevent falls and decrease skin irritation.
4.6.4. Identify signs and symptoms of constipation, diarrhea and gastro□intestinal or rectal bleeding.
4.6.5. Assist with elimination needs (e.g., bedpan, commode, urinal).
4.6.6. Maintain a closed urinary catheter system.

Outcome 4.7. Psycho□social, Behavioral and Emotional

I Can... Provide for psycho□social, behavioral and emotional development and assist individuals with disorders.

Competencies

4.7.1. Engage an individual in structured social activities and interactions to orient to person, place and time.
4.7.2. Observe for overstimulation and situations requiring crisis intervention.
4.7.4. Promote independence, self□care and self□actualization.
4.7.7. Describe the importance of providing time for an individual with development and physical disabilities to communicate and perform tasks.

4.7.9. Assist clients with appropriate coping mechanisms.

Outcome 4.8. End□of□Life Care

I Can... Provide physical, emotional and spiritual support to individuals and families at end-of-life.

Competencies

4.8.1. Describe variations in advanced directives and responsibilities of healthcare providers.
4.8.2. Identify stages of reaction to death and dying (e.g., denial, anger, bargaining, depression, acceptance).
4.8.3. Describe the goal of palliative care and hospice.
4.8.4. Provide resources for an individual's cultural, spiritual and religious needs.
4.8.5. Enable individuals to express their feelings and to control their care.
4.8.6. Perform postmortem care in compliance with legal guidelines and cultural, spiritual and religious preferences.

Strand 5. Bioscience Research and Development

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

Outcome 5.1. Handling, Preparation, Storage and Disposal

I Can... Follow standard operating protocols for handling, preparing, storing and disposing of specimens, supplies and equipment.

Competencies

5.1.1. Use standard operating procedures for the safe use of instruments, equipment and gas cylinders.
5.1.2. Prepare and interpret labels for chemicals, supplies and equipment.
5.1.3. Use chemical references to identify hazards associated with handling and storing chemical materials.
5.1.4. Neutralize acids, bases, or caustic solutions for handling and disposal.
5.1.5. Ensure clean room integrity using Standard Operating Procedures (SOPs).

Outcome 5.3. Microbiology Testing and Technology

I Can... 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.

Competencies

5.3.3. Explain bacterial metabolism, reproduction, cell structures and their functions.

Outcome 5.9. Clinical Laboratory Techniques and Procedures

I Can... Perform and interpret clinical laboratory techniques and procedures.

Competencies

5.9.1. Maintain the integrity of a clinical sample, including patient/client identification and chain of custody and explain how to adhere to chain-of-custody guidelines when required (e.g., forensic studies, blood alcohol, drug screen).

5.9.2. Describe control substance procedures, protocols, documentation and labeling techniques.

5.9.3. Differentiate between aseptic and sterile procedures when collecting specimens and maintain bio□hazardous materials procedures (e.g., urine, feces, sputum, blood).

5.9.4. Discuss the methods of blood collection, specimen processing and labeling procedures and the potential problems that may occur.

5.9.5. Identify patient/client and inform them of the medical procedure to be performed.

5.9.6. Initiate intravenous (IV) therapy, blood withdrawal and arterial puncture using various techniques (e.g., butterfly, vacutainer, syringe, capillary puncture) according to current Occupational Safety and Health Administration (OSHA), Centers for Disease Control (CDC), Clinical Lab Improvement Act (CLIA) and the National Committee for Clinical Laboratory Standards (NCCLS) guidelines.

5.9.7. Identify resources needed for special procedures and demonstrate knowledge of special phlebotomy collection procedures (e.g., phenylketonuria [PKU], galactosemia, blood donations, blood cultures).

5.9.8. Differentiate between specimen collection, storage and handling techniques (e.g., temperature, light, time).

5.9.9. Determine order of draw and appropriate anticoagulants for ordered tests and correlate tube stopper colors with tube additives and their actions.

5.9.10. Identify complications of venipuncture (e.g., patient fainting, short draw, inadequate inversion, hemolysis, lack of blood flow, hematoma, petechia, nerve injury, mastectomy issues).

5.9.11. Prepare peripheral blood smears and discuss testing volumes and methods for minimizing excessive blood collection volumes.

5.9.12. Set up a procedure and collect an electrocardiograph (ECG).

5.9.13. Determine the general criteria for suitability of a specimen for analysis and reasons for specimen rejection and recollection.

5.9.14. Identify major routine tests performed in clinical lab sections (e.g., blood bank, chemistry, hematology, serology, microbiology, urinalysis).

5.9.15. Instruct patients/clients in the collection procedures for random, routine, non□blood specimen collection (e.g., clean□catch, mid□stream urine, stool specimens, semen, or sputum for testing.)

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**

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

Competencies

6.1.7. Differentiate between the types and content of patient health records and the data collected (e.g., paper□based, electronic health records, personal health records).

6.1.8. Describe health record documentation requirements of external agencies and organizations (e.g., those specified by accrediting bodies, regulatory bodies, professional review organizations, licensure, reimbursement, discipline□specific "good practice").

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

I Can... Apply the fundamentals of confidentiality, privacy and security to communicate health/medical information accurately and within legal/regulatory bounds across the organization and between organizations.

Competencies

6.2.1. Identify components of the court systems and distinguish between public and private law, civil and criminal law and tort, contract actions and the trial process.

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

6.2.5. Distinguish between confidential and non□confidential information within the healthcare system and document, categorize and prioritize requests for personal health information according to internal/external privacy and confidentiality guidelines (e.g. Health Insurance Portability and Accountability Act [HIPAA]).

6.2.8. Describe the possible consequences of inappropriate use of health data in terms of disciplinary action.

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

I Can... Perform functions within Electronic Health Records (EHRs) and Personal Health Record (PHRs) to ensure accurate information, retrieve information and maintain data.

Competencies

6.3.1. Create and update documents within the EHR and PHR systems.

6.3.2. Locate and retrieve information in the EHR and other electronic sources for a variety of

purposes.

6.3.3. Populate and use health data content.

6.3.6. Document profession□specific information in an EHR.

Scope and Sequence

Principles of Allied Health Medicine (072035)

West Shore Career-Technical District

Course Description:
In this, first course students will apply knowledge and clinical skills necessary to assess, plan, provide, and evaluate care to patients in varied healthcare settings. Students will apply first aid principles and techniques needed for response to choking, cardiopulmonary resuscitation, and other life-threatening emergencies. Emphasis will be placed on regulatory compliance, patient safety, pathophysiology, and medical interventions. Additionally, this course introduces psychomotor skills needed to assist individuals in meeting basic human needs.

In addition, this course incorporates the standards and guidelines from Ohio Department of Health curriculum for the Nurse Aide Training and Competency Evaluation Program (NATCEP) as indicated throughout. Please reference the NATCEP curriculum in its entirety in the appendix.

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**

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

Competencies

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

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.

2.1.7. Describe the gastrointestinal system, including structures of chewing, swallowing, digestion and elimination and the role of accessory organs including the liver, pancreas and gallbladder.

2.1.8. Describe the urinary system structures and principles of glomerular filtration, electrolyte exchanges and their role in the production of red blood cells and the control of blood pressure.

2.1.9. Describe the immune system and the lymphatic system's role in immunity.

2.1.10. Describe the sensory system, related structures and functions.

2.1.11. Describe the endocrine system, its structures and the role of hormones.

2.1.12. Differentiate between the male and female reproductive system, structures and function.

2.1.13. Describe the integumentary system, related structures and functions.

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

2.1.15. Explain the pathophysiology changes associated with or resulting from disease or injury.

Outcome 2.2. Evaluate Body Systems

I Can... 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).
2.2.4. Perform vital signs.
2.2.5. Determine level of consciousness and cognition.
2.2.6. Determine pupil reactivity and accommodation.
2.2.7. Determine site, onset, type, quality and level of pain.
2.2.8. Determine what decreases and increases the pain experience.
2.2.9. Auscultate lungs for abnormal breath sounds.
2.2.10. Perform pulmonary function testing (e.g., vital capacity, tidal volumes, total lung capacity).
2.2.11. Auscultate bowel sounds and palpate abdomen for distention and tautness.
2.2.12. Determine joint mobility and muscle strength (e.g., range-of-motion).
2.2.13. Identify open wounds, skin abrasions, decubitus and rashes.
2.2.14. Observe for excessive body fluid loss (i.e., blood loss, diarrhea, vomiting, profuse diaphoresis).
2.2.15. Identify symptoms of substance abuse.
2.2.16. Identify patterns of behavior to determine risk to self and others.

Outcome 2.3. Medical Terminology

I Can... 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 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.

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

I Can... 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 obtain informed consent.
3.1.3. Describe confidentiality guidelines in the Health Insurance Portability and Accountability Act (HIPAA).
3.1.4. Decrease the risk of injury and elopement to the individual or others (e.g., by using restraints, alarms, bedrails, hi□low beds, padding, non□slip footwear and hand rails).
3.1.5. Identify and respond to emergency call lights and alarms.
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, hazardous chemicals).
3.1.7. Demonstrate chemical and electrical safety and their application to the work environment.
3.1.8. Determine the risk of burns resulting from equipment, liquids, chemicals and fire.
3.1.9. Describe and follow the precautions used in oxygen therapy and pressurized gases.
3.1.10. Clean, store, or dispose of supplies, specimens and laboratory glassware following protocol and standard precautions.
3.1.11. Determine risk of bleeding and implement precautions.
3.1.12. Implement disaster preparedness response to fire, tornado, emergency evacuation, hazardous material spill, infant/child abduction, bomb threat, violent person, active shooter, missing adult and loss of power.
3.1.13. Identify risk factors of exposure to hazardous materials (i.e., chemical, radiologic, microbial) and provide safety precautions.
3.1.14. Apply principles of asepsis and sterile techniques and determine recommended use of germicides (e.g., sterilant, disinfectant, antiseptic).
3.1.15. Follow Standard Operational Protocols (SOP's) for exposure and disposal of tissue cultures,contaminated materials, body fluids and radioisotopes and place sharps in biohazard containers.
3.1.16. Use proper body mechanics to perform therapeutic interventions.
3.1.17. Identify electrical, thermal and drowning risks in aquatic environments.

3.1.18. Account for all instruments, supplies and equipment.
3.1.19. Control the level of distractions and noise.
3.1.20. Perform the safe operation, packing and cleaning of equipment.

Outcome 3.2. Health Promotion Interventions

I Can... 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 body composition, neuromuscular flexibility, agility, balance, coordination and proprioception.
3.2.3. Measure and document an individual's cardiorespiratory fitness, muscular strength, endurance and power.
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.

Outcome 3.4. Emergency Interventions

I Can... Respond to emergencies and natural disasters by performing emergency interventions and proper documentation.

Competencies

3.4.1. Perform cardiopulmonary resuscitation (CPR), first□aid and automated external defibrillation (AED).
3.4.2. Control hemorrhage.
3.4.3. Recognize and respond to anaphylactic shock.

Outcome 3.5. Nutritional Interventions

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

Competencies

3.5.1. Describe the role and effects of carbohydrates, proteins, fats, electrolytes, minerals, vitamins and water in different body systems and life processes.

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.

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

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

Competencies

4.1.1. Describe the guidelines of the governing body concerning abuse, mistreatment, neglect and misappropriation of an individual's property.
4.1.2. Inform the supervisor of any changes in the individual's condition.
4.1.3. Provide input to and work within an age□appropriate plan of care developed by the interdisciplinary team for each individual.
4.1.4. Describe the primary purpose of healthcare settings (e.g., long□term care facility [LTCF], acute care, home health).
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.

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.
4.2.4. Maintain aids that promote oral, auditory and visual health (e.g., eye glasses, hearing aids, dentures).
4.2.5. Arrange food and utensils on the meal tray in a clock fashion for visually impaired individuals.
4.2.6. Position an individual for meals to avoid choking and assist in feeding.

4.2.7. Maintain a proper environment for eating (e.g., noxious odors, contaminated items, loud noises).
4.2.8. Provide aids to facilitate communication for speech impaired individuals (e.g., picture cards, slates, notepads).

Outcome 4.3. Microorganisms, Infection Control and Infection

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

Competencies
4.3.1. Describe the chain of infection (e.g., host, vectors, portal of entry).
4.3.2. Describe mechanisms for the spread of infection, including airborne, vector□borne, common vehicle, droplet and contact.
4.3.3. Describe methods of controlling or eliminating microorganisms and the importance of practices that hinder the spread of infection (e.g., hand washing, disinfecting care areas).
4.3.4. Use personal protective equipment (PPE) when encountering body fluids, potential of splashing, or respiratory droplets.
4.3.5. Demonstrate various decontamination techniques and procedures.
4.3.6. Demonstrate precaution guidelines.
4.3.7. Maintain isolation precautions.
4.3.8. Identify signs and symptoms of infection (e.g., fever, confusion, areas of redness, swelling, pain).

Outcome 4.4. Hygiene

I Can... Perform personal hygiene for individuals across the life span and document.

Competencies
4.4.1. Perform oral and denture care.
4.4.2. Perform personal hygiene (e.g., bathing, perineal care, shaving, shampooing).
4.4.3. Assist or dress and undress impaired individuals.
4.4.4. Perform nail care, foot soaks and observe skin for reddened or discolored areas and abnormalities.
4.4.5. Observe and report skin condition over boney prominences.

Outcome 4.5. Ambulation and Mobility

I Can... Assist in the safe ambulation and mobility of individuals across the life span continuum and document.

Competencies

4.5.1. Describe risks of immobilization and take measures (e.g., apply anti□embolic stockings, breathing, turning) to prevent complications.
4.5.2. Apply assistive devices based on individual needs.
4.5.3. Operate wheelchairs, Geri Chairs and lifts.
4.5.4. Prepare an individual for ambulation with skid□proof footwear, use gait belt and encourage the individual to use assistive devices.
4.5.5. Demonstrate ambulation techniques for the use of walkers, crutches and canes.
4.5.6. Reposition slowly to avoid postural hypotension.
4.5.7. Support the individual on the affected side of the body to prevent falls or injury.
4.5.8. Position the individual in bed for comfort, to maintain proper body alignment and to decrease pressure on boney prominences.

Outcome 4.6. Elimination

I Can... Assist with elimination needs across the life span continuum and document.

Competencies

4.6.1. Describe changes in elimination related to the aging process.
4.6.2. Measure intake and output.
4.6.3. Describe the importance of and develop a toileting schedule to maintain the individual's dignity, prevent falls and decrease skin irritation.
4.6.4. Identify signs and symptoms of constipation, diarrhea and gastro□intestinal or rectal bleeding.
4.6.5. Assist with elimination needs (e.g., bedpan, commode, urinal).
4.6.6. Maintain a closed urinary catheter system.

Outcome 4.7. Psycho-social, Behavioral and Emotional

I Can... Provide for psycho-social, behavioral and emotional development and assist individuals with disorders.

Competencies

4.7.1. Engage an individual in structured social activities and interactions to orient to person, place and time.
4.7.2. Observe for overstimulation and situations requiring crisis intervention.
4.7.3. Describe the importance of quiet time and rest periods.
4.7.4. Promote independence, self□care and self□actualization.
4.7.5. Describe the importance of intimate/sexual relationships across the life span.
4.7.6. Redirect inappropriate behavior.
4.7.7. Describe the importance of providing time for an individual with development and physical disabilities to communicate and perform tasks.
4.7.8. Provide assistive care and support to clients experiencing alterations in psychosocial integrity.

4.7.9. Assist clients with appropriate coping mechanisms.

Outcome 4.8. End-of-Life Care

I Can... Provide physical, emotional and spiritual support to individuals and families at end-of-life.

Competencies

4.8.1. Describe variations in advanced directives and responsibilities of healthcare providers.
4.8.2. Identify stages of reaction to death and dying (e.g., denial, anger, bargaining, depression, acceptance).
4.8.3. Describe the goal of palliative care and hospice.
4.8.4. Provide resources for an individual's cultural, spiritual and religious needs.
4.8.5. Enable individuals to express their feelings and to control their care.
4.8.6. Perform postmortem care in compliance with legal guidelines and cultural, spiritual and religious preferences.

Strand 5. Bioscience Research and Development

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

Outcome 5.1. Handling, Preparation, Storage and Disposal

I Can... Follow standard operating protocols for handling, preparing, storing and disposing of specimens, supplies and equipment.

Competencies

5.1.1. Use standard operating procedures for the safe use of instruments, equipment and gas cylinders.
5.1.2. Prepare and interpret labels for chemicals, supplies and equipment.
5.1.3. Use chemical references to identify hazards associated with handling and storing chemical materials.
5.1.4. Neutralize acids, bases, or caustic solutions for handling and disposal.
5.1.5. Ensure clean room integrity using Standard Operating Procedures (SOPs).
5.1.6. Sample, monitor and record the environmental conditions of the facility (e.g. air quality, temperature, microbial contaminations).
5.1.7. Adjust, calibrate, maintain and perform systems diagnostics on laboratory equipment.
5.1.8. Maintain equipment logs and determine when to perform, implement, or schedule preventive maintenance and/or systems updates.
5.1.9. Verify expiration dates and lot numbers.
5.1.10. Implement a chemical inventory system that includes all pertinent information regarding stability, hazards and sensitivity.

5.1.11. Maintain an inventory system for manufactured products, including a monitoring system for the pilfering of materials.
5.1.12. Maintain separate in-processing, quarantine and release areas.
5.1.13. Monitor and maintain animal behavior, welfare and husbandry.

Outcome 5.9. Clinical Laboratory Techniques and Procedures

I Can... Perform and interpret clinical laboratory techniques and procedures.

Competencies

5.9.1. Maintain the integrity of a clinical sample, including patient/client identification and chain of custody and explain how to adhere to chain□of□custody guidelines when required (e.g., forensic studies, blood alcohol, drug screen).
5.9.2. Describe control substance procedures, protocols, documentation and labeling techniques.
5.9.3. Differentiate between aseptic and sterile procedures when collecting specimens and maintain bio□hazardous materials procedures (e.g., urine, feces, sputum, blood).
5.9.4. Discuss the methods of blood collection, specimen processing and labeling procedures and the potential problems that may occur.
5.9.5. Identify patient/client and inform them of the medical procedure to be performed.
5.9.6. Initiate intravenous (IV) therapy, blood withdrawal and arterial puncture using various techniques (e.g., butterfly, vacutainer, syringe, capillary puncture) according to current Occupational Safety and Health Administration (OSHA), Centers for Disease Control (CDC), Clinical Lab Improvement Act (CLIA) and the National Committee for Clinical Laboratory Standards (NCCLS) guidelines.
5.9.7. Identify resources needed for special procedures and demonstrate knowledge of special phlebotomy collection procedures (e.g., phenylketonuria [PKU], galactosemia, blood donations, blood cultures).
5.9.8. Differentiate between specimen collection, storage and handling techniques (e.g., temperature, light, time).
5.9.9. Determine order of draw and appropriate anticoagulants for ordered tests and correlate tube stopper colors with tube additives and their actions.
5.9.10. Identify complications of venipuncture (e.g., patient fainting, short draw, inadequate inversion, hemolysis, lack of blood flow, hematoma, petechia, nerve injury, mastectomy issues).
5.9.11. Prepare peripheral blood smears and discuss testing volumes and methods for minimizing excessive blood collection volumes.
5.9.12. Set up a procedure and collect an electrocardiograph (ECG).
5.9.13. Determine the general criteria for suitability of a specimen for analysis and reasons for specimen rejection and recollection.
5.9.14. Identify major routine tests performed in clinical lab sections (e.g., blood bank, chemistry, hematology, serology, microbiology, urinalysis).
5.9.15. Instruct patients/clients in the collection procedures for random, routine, non□blood specimen collection (e.g., clean□catch, mid□stream urine, stool specimens, semen, or sputum for testing.)

5.9.16. Perform Clinical Laboratory Improvement Act (CLIA) waived tests (e.g., dipstick or tablet reagent urinalysis, blood glucose by glucose monitoring devices, ovulation tests, urine pregnancy tests).
5.9.17. Assist with preparations for non□CLIA waived procedures.

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

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

Competencies

6.1.7. Differentiate between the types and content of patient health records and the data collected (e.g., paper□based, electronic health records, personal health records).

Outcome 6.2. Confidentiality, Privacy and Security

I Can... Apply the fundamentals of confidentiality, privacy and security to communicate health/medical information accurately and within legal/regulatory bounds across the organization and between organizations.

Competencies

6.2.1. Identify components of the court systems and distinguish between public and private law, civil and criminal law and tort, contract actions and the trial process.
6.2.4. Identify what constitutes the authorized access, release and use of personal health data.
6.2.5. Distinguish between confidential and non-confidential information within the healthcare system and document, categorize and prioritize requests for personal health information according to internal/external privacy and confidentiality guidelines (e.g. Health Insurance Portability and Accountability Act [HIPAA]).

Scope and Sequence

Medical Terminology (072150)

West Shore Career-Technical District

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 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

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

Competencies

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

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.

2.1.7. Describe the gastrointestinal system including structures of chewing, swallowing, digestion, and elimination and the role of accessory organs including the liver, pancreas and gallbladder.

2.1.8. Describe the urinary system structures and principles of glomerular filtration, electrolyte exchanges, role in the production of red blood cells and control of blood pressure.

2.1.9. Describe the immune system and the lymphatic system's role in immunity.

2.1.10. Describe the sensory system, related structures and functions.

2.1.11. Describe the endocrine system , structures and the role of hormones.

2.1.12. Differentiate between the male and female reproductive system, structures, and function.

2.1.13. Describe the integumentary system, related structures, and functions.

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

2.1.15. Explain the pathophysiology changes associated with or resulting from disease or injury.

Outcome: 2.3. Medical Terminology

I Can... 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.

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: 3.3. Pharmaceutical Interventions

I Can... 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 brand and generic names of prescription medications, over-the-counter drugs and herbal preparations.

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

I Can... Demonstrate 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 healthcare settings (e.g., long-term care facility (LTCF), acute care, and home health).
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.

Outcome: 4.3. Microorganisms, Infection Control and Infection

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

Competencies

4.3.1. Describe the chain of infection (e.g. host, vectors, and portal of entry).
4.3.2. Describe mechanisms for the spread of infection including airborne, vector-borne, common vehicle, droplet, and contact.
4.3.3. Describe methods of controlling or eliminating microorganisms and the importance of practices that hinder the spread of infection (e.g. hand washing, disinfecting care areas).

Strand 5. Bioscience Research and Development

Learners will demonstrate the skills and knowledge of interpreting laboratory requests, using protective clothing 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

I Can... 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.

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. Explain bacterial metabolism, reproduction, cell structures and their functions.
5.3.4. Identify aerobic bacteria through morphological, physical and biochemical properties.

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

I Can... 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 and differentiate data versus information or competency.

6.1.5. Use health record data collection tools (e.g input screens, document templates).

6.1.6. Recognize standard data definitions, vocabularies, terminologies, nomenclatures (e.g. SNOMED-CT), classifications (e.g. ICD9CM, ICD10, CPT), and/or relevant healthcare data sets (e.g. OASIS, HEDIS, UHDDS) as used in the organization's health information systems.

6.1.7. Differentiate between the types and content of patient health records and the data collected (e.g. paper-based, electronic health records, and personal health records).

6.1.8. Describe health record documentation requirements of external agencies and organizations (e.g. those specified by accrediting bodies, regulatory bodies, professional review organizations, licensure, reimbursement, discipline-specific "good practice").

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

Outcome: 6.2. Confidentiality, Privacy and Security

I Can... Apply the fundamentals of confidentiality, privacy and security to communicate health/medical information accurately and within legal/regulatory bounds across the organization and between organizations.

Competencies

6.2.1. Identify components of the court systems and distinguish between public and private law, civil and criminal law and tort, contract actions, and the trail process.

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

6.2.5. Distinguish between confidential and non-confidential information within the healthcare system and document, categorize, and prioritize requests for personal health information according to internal/external privacy and confidentiality guidelines (e.g. HIPAA).

6.2.8. Describe the possible consequences of inappropriate use of health data in terms of disciplinary action.

6.2.10. Describe elements that are included in the design of audit trails and data quality monitoring programs.

Outcome: 6.3. Electronic Health Records and Coding

I Can... Perform functions within Electronic Health Records (EHR) and Personal Health Record (PHR) to ensure accurate information, retrieve information and maintain data.

Competencies

6.3.1. Create and update documents within the electronic health record EHR and personal health record PHR systems.
6.3.2. Locate and retrieve information in the electronic health record EHR and other electronic sources for a variety of purposes.
6.3.3. Populate and use health data content.
6.3.4. Apply documentation management principles to ensure data quality, legal compliance and integrity.
6.3.5. Apply methods to ensure authenticity, timeliness, and completeness of health data entries in electronic information systems.
6.3.6. Document profession-specific information in an electronic health record EHR.
6.3.7. Identify methods to correct errors entered in an electronic health record EHR.
6.3.8. Access reference material available through an electronic health record EHR.
6.3.9. Identify the source of information entered in an electronic health record (EHR).
6.3.10. Resolve minor technology problems associated with using and electronic health record (EHR).
6.3.11. Follow access protocols for entry to an electronic health record (EHR).
6.3.12. Manage documents within the electronic health record (EHR) and personal health record (PHR) utilizing filing and patient identification methodologies.
6.3.13. Complete health information management (HIM) functions (e.g. scanning, transcription, releasing information) in an electronic environment.
6.3.14. Perform procedural and diagnostic coding according to managed care policies and procedures (including third-party guidelines).
6.3.15. Describe the common insurance claim procedures and apply guidelines of documentation and processing to ensure federal, state, and third party insurance reimbursements are included and complete insurance claim forms.
6.3.16. Select accurate medical terminology to record and code charges and reimbursement aligned with regulatory and legal purposes.

Scope and Sequence
Health Science Capstone 072105
West Shore Career-Technical District

Course Description

The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in Health Sciences program in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or apprenticeship (i.e. clinical experience).

Capstone also includes several senior projects, employability skills, and clinical experience with patient care.

Student Assessment Policy
Health Careers Technology Program
West Shore Career and Technical Education District
Lakewood City Schools

The student will perform competencies and key indicators in a manner acceptable to the business community and hospital standards. The standards set for these competencies are recommended by the advisory committee members and employers in the business community and evaluated by the teacher following these guidelines. Competencies will be identified which must be mastered in order to receive credit for the course.
In order to measure the progress of each student in the program and to measure the effectiveness of the total program, the following evaluation procedures will be used:

- Pretests
- Post tests
- Teacher observation and evaluations
- Self evaluations
- Class discussions
- Skill tests
- Project development
- Oral tests
- Work/field experiences; business/hospital partnership evaluations
- Weekly progress reports
- Daily grades
- Lab performance
- WEBXAM / End of Course (EOC) TESTING

Measurement of learning will be an ongoing activity with emphasis on laboratory activities and competency improvement. Evaluation will be accomplished through pre-assessment of student skills, frequent formative assessment, both visual and written, and summative evaluations to determine mastery of competencies. Formative assessments that are conducted during instruction help the teacher make necessary instructional adjustments. All evaluations are based on a point system. A percentage is then calculated and a letter grade is assigned as follows:

A = 90-100%
B = 80-89%
C = 70-79%
D = 60-69%
F = below 60%

At the completion of the program each student will receive a Career Passport indicating competencies in which the student is proficient.