Maryland
STATE DEPARTMENT OF EDUCATION

Program of Study Guide: Certified Nursing Assistant - DRAFT

Comprehensive guidelines and course standards for the Certified Nursing Assistant

Office of College and Career Pathways

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Purpose

The purpose of this document is to communicate the required Career and Technical Education (CTE) academic standards for the Certified Nursing Assistant Program of Study. The academic standards in this document are theoretical and performance based. The standards contain content from multiple state departments of education, Maryland Board of Nursing, 42 CFR483.151-152 Federal Nursing Assistant Training Standards, American Heart Association First Aid and CPR Certification Standards, National Healthcareer Association (NHA) Standards for Patient Care Technicians, and have been reviewed and vetted by members of the Maryland business and industry community.

In addition to academic standards, the Maryland State Department of Education (MSDE) has incorporated into this document Labor Market Information (LMI) definitions and explanations for the Program of Study; program aligned Industry Recognized Credentials; and Work-Based Learning resources and requirements by course level.

This document is intended for use by educational administrators and practitioners. A similar document is available for each state-approved CTE Program of Study.

Standards Sources

Certified Nursing Assistant standards are based on various research-backed sources, best practices, and national frameworks that guide effective K-12 education. The following sources provide a rigorous foundation for the Certified Nursing Assistant standards, ensuring they are well-rounded, research-driven, and aligned with national expectations and young learners' unique needs.

Here are the primary sources that these standards draw from:

1. **Maryland Board of Nursing Certified Nursing Assistant I Certification Standards**
   A. **Description:** The Maryland Board of Nursing establishes regulations for Certified Nursing Assistant (CNA) training programs and competency evaluations, including the Certified Nursing Assistant I (CNA-I) and Geriatric Nursing Assistant (GNA) certifications.
   B. **B. Usage:** These standards guide the design of CNA I and CNA II courses to ensure students meet the educational and clinical requirements for Maryland CNA-I, including both CNA and GNA certification exams.
   C. **C. Source:** Maryland Board of Nursing CNA Certification Standards

2. **42 CFR § 483.151-152 Federal Nursing Assistant Training Standards**
   A. **Description:** Federal regulations under 42 CFR § 483.151-152 establish the minimum requirements for nursing assistant training programs, including curriculum, clinical hours, and competency evaluations.
   B. **B. Usage:** These regulations inform the curriculum and clinical training hours required in the CNA program, ensuring compliance with federal standards for nursing assistant training.
   C. **C. Source:** 42 CFR § 483.151-152 Federal Regulations

3. **Advance CTE Education Career Cluster Framework: Health and Human Services**
   A. **Description:** The Advance CTE Education Career Cluster Framework defines the knowledge and skills necessary for success in the Health and Human Services Cluster, promoting health, wellness, and resilience in individuals and communities.
   B. **B. Usage:** The framework provides a foundation for aligning the CNA program to broader healthcare career pathways and industry expectations.
   C. **Source:** Advance CTE Career Clusters.

4. **American Heart Association First Aid and CPR Certification Standards**
   A. **Description:** The American Heart Association (AHA) provides guidelines and certifications for First Aid, CPR, and Basic Life Support, which are widely recognized in healthcare and education.
   B. **Usage:** AHA standards are integrated into the CNA curriculum, requiring students to obtain First Aid certification to enhance patient safety and emergency care skills.
   C. **Source:** American Heart Association First Aid Certification

5. **National Healthcareer Association (NHA) Standards for Patient Care Technicians**
   A. **Description:** The NHA establishes certification standards and competencies for patient care technicians, with relevance to advanced nursing assistant training.
   B. **B. Usage:** These standards are referenced for advanced coursework in the CNA program, such as Clinical Nursing Assistant III and IV, to prepare students for progression to LPN or RN pathways.
   C. **C. Source:** National Healthcareer Association

6. **American Nurses Association (ANA) Code of Ethics**
   A. **Description:** The ANA Code of Ethics provides a framework for ethical practice in nursing, emphasizing patient-centered care, confidentiality, and professionalism.
   B. **B. Usage:** Ethical principles from the ANA guide instruction in professionalism and decision-making across all CNA program courses.
   C. **C. Source:** ANA Code of Ethics

7. **Next Generation Science Standards (NGSS)**
   A. **Description:** The NGSS establishes rigorous science education benchmarks, focusing on scientific inquiry, systems thinking, and the application of science concepts in real-world contexts.
   B. **B. Usage:** These standards support the integration of anatomy, physiology, and pathophysiology content in Clinical Nursing Assistant III to align with science education requirements.
   C. **C. Source:** Next Generation Science Standards

8. **Occupational Safety and Health Administration (OSHA) Healthcare Workplace Standards**
   A. **Description:** OSHA sets workplace health and safety standards to protect workers in healthcare environments, including regulations on handling biohazards and ergonomic safety.
   B. **B. Usage:** These standards are embedded in CNA courses to educate students on safe practices, workplace hazards, and emergency response.
   C. **C. Source:** OSHA Healthcare Standards

9. **Medical Terminology Standards by Health Occupations Students of America (HOSA)**
   A. **Description:** HOSA provides guidelines and resources for teaching medical terminology as an essential skill for healthcare professionals.
   B. **Usage:** These standards ensure consistent and accurate use of medical terminology across CNA program coursework.
   C. **Source:** HOSA Medical Terminology

Course Descriptions

Course Level	Course Information	Description
Required Core: Course 1	Certified Nursing Assistant I SCED: <XX> Grades: 9-12 Prerequisite: None Credit: 1	Certified Nursing Assistant (CNA) I course introduces students to the foundational knowledge and skills required to pursue a career in healthcare as a Certified Nursing Assistant. Students will gain an understanding of healthcare systems, patient care practices, medical terminology, and safety protocols. Through classroom instruction and hands-on practice, students will learn to measure vital signs, provide basic patient care, and understand the principles of infection control. Emphasis is placed on the development of professionalism, communication, and ethical decision-making. This course prepares students to progress into the Certified Nursing Assistant II course, where they will complete the requirements for the Maryland Board of Nursing (MBON) CNA-I certification which includes both CNA and GNA certifications.
Required Core: Course 2	Certified Nursing Assistant II SCED: <XX> Grades: 10-12 Prerequisite: Certified Nursing Assistant I Credit: 1	Certified Nursing Assistant II course builds upon the foundational skills from the Certified Nursing Assistant I course, focusing on advanced patient care techniques and preparation for certification as a MBON Certified Nursing Assistant I (CNA-I) which combines both the CNA and GNA certifications. Students will complete clinical training in supervised healthcare settings, gaining real-world experience in providing care to diverse patient populations, including the elderly. Topics include geriatric care, restorative care, palliative care, and preparation for state competency evaluations. By the end of this course, students will meet the Maryland Board of Nursing requirements and be eligible to sit for the MBON CNA I examination, which combines both the CNA and GNA certifications.
Optional Flex: Course 1	Certified Nursing Assistant III SCED: <XX> Grades: 10-12 Prerequisite: Certified Nursing Assistant I and	Certified Nursing Assistant III course focuses on the structure and functions of the human body to provide students with the advanced knowledge needed to deliver effective patient care. Students will explore the relationships between anatomy, physiology, and disease, with emphasis on homeostasis, pathophysiology, and responses to the

	II Credit: 1	external environment. Laboratory investigations and the use of medical technologies will prepare students to analyze diagnostic data, understand therapeutic interventions, and apply science concepts in clinical scenarios. This course is ideal for students preparing to enter Licensed Practical Nursing (LPN) programs or other advanced healthcare pathways.
Optional Flex: Course 2	Career Connected Learning I SCED: <XX> Grades: 11-12 Prerequisite: Certified Nursing Assistant I and II Credit: 1	This flexible, work-based learning course introduces students to real-world applications of classroom knowledge and technical skills through on-the-job experiences and reflective practice. Students engage in career exploration, skill development, and professional networking by participating in youth apprenticeships, registered apprenticeships, pre-apprenticeships, internships, capstone projects, or other approved career-connected opportunities. Variable credit (1–3) accommodates the required on-the-job training hours and related instruction. By integrating industry standards, employability skills, and personalized learning goals, Career Connected Learning I equips students to make informed career decisions, develop a professional portfolio, and build a strong foundation for success in postsecondary education, training, or the workforce.
Optional Flex: Course 3	Career Connected Learning II SCED: <XX> Grades: 11-12 Prerequisite: Career Connected Learning I Credit: 1	This flexible, work-based learning course introduces students to real-world applications of classroom knowledge and technical skills through on-the-job experiences and reflective practice. Students engage in career exploration, skill development, and professional networking by participating in youth apprenticeships, registered apprenticeships, pre-apprenticeships, internships, capstone projects, or other approved career-connected opportunities. Variable credit (1–3) accommodates the required on-the-job training hours and related instruction. By integrating industry standards, employability skills, and personalized learning goals, Career Connected Learning I equips students to make informed career decisions, develop a professional portfolio, and build a strong foundation for success in postsecondary education, training, or the workforce.

Dual Enrollment and Career Connected Learning Experiences Must be Aligned to the CTE Core.

Industry-Recognized Credentials and Work-Based Learning

Industry-Recognized Credentials
By the end of Certified Nursing Assistant II: MBON Certified Nursing Assistant I **Optional Credentials (via the Flex Course options**): Dual Credit Options, Apprenticeships, Internships

Work-Based Learning Examples and Resources		
Certified Nursing Assistant I**:** **Career Awareness**	Certified Nursing Assistant II and III: **Career Preparation**	**Flex Courses: Career Preparation**
• Industry Visits • Guest Speakers • Participation in Career and Technical Student Organizations • Postsecondary Visits – Program Specific Site Tours • Mock Interviews	• All of Career Awareness plus the following: • Job Shadow • Paid and Unpaid Internships	• Paid and Unpaid Internships • Apprenticeships

Labor Market Information: Definitions and Data

Labor market information (LMI) plays a crucial role in shaping Career and Technical Education (CTE) programs by providing insights into industry demands, employment trends, and skills gaps. This data helps education leaders assess the viability of existing programs and identify opportunities for new offerings. By aligning CTE programs with real-time labor market needs, schools can better prepare students for in-demand careers and ensure that resources are effectively utilized to support pathways that lead to high-quality, sustainable employment.

Standard Occupational Code (SOC) and Aligned Industry:

Indicator	Definition	Pathway Labor Market Data
High Wage[1]	Those occupations that have a 25th percentile wage equal to or greater than the most recent MIT Living Wage Index for one adult in the state of Maryland, and/or leads to a position that pays at least the median hourly or annual wage for the DC-VA-MD-WV Metropolitan Statistical Area (MSA). *Note: A 25th percentile hourly wage of $24.74 or greater is required to meet this definition.*	**Standard Occupational Code:** 31-1131: Nursing Assistants in Maryland **Hourly Wage/Annual Salary:** 25th Percentile: $17.30 / $35,984.00 50th Percentile: $18.57 / $38,625.00 75th Percentile: $21.70 / $45,136.00
High Skill	Those occupations located within the DC-VA-MD-WV Metropolitan Statistical Area (MSA) with the following education or training requirements: completion of an apprenticeship program; completion of an industry-recognized certification or credential; associate's degree, bachelor's degree, or higher.	**Typical Entry-Level Education:** Postsecondary nondegree award.
In-Demand	Annual growth plus replacement, across all Maryland occupations, is 405 openings between 2024-2029.	**Annual Openings –** 4.298

[1] Living Wage Calculator: https://livingwage.mit.edu/states/24

Labor Market Information Data Source

Lightcast Q4 2024 Data Set. Lightcast occupation employment data are based on final Lightcast industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates are also affected by county-level Lightcast earnings by industry. Foundational data for the state of Maryland is collected and reported by the Maryland Department of Labor.

Methodology for High Wage Calculations

To combine labor market data across multiple Standard Occupational Classifications (SOCs), a weighted average approach was used to ensure accurate representation of the marketplace. Median wages for each SOC were weighted based on their respective employment levels, reflecting the relative demand for each occupation. This method ensures that occupations with higher employment contribute proportionately to the overall wage calculation. Additionally, job openings from all relevant SOCs were summed to determine the total projected demand. For example, if Mechanical Engineers account for 67% of total employment and Electrical Engineers for 33%, their respective wages are weighted accordingly, and job openings are aggregated to provide a comprehensive view of labor market opportunities. This approach delivers a balanced and accurate representation of both wages and employment demand for the program.

Methodology for In-Demand Calculations

The baseline for annual job openings, taking into account new positions and replacement positions, was determined by taking the average of all annual job openings between 2024 and 2029 across all 797 career sectors at the 5-digit SOC code level. For the 2024-2029 period, average job openings (growth + replacement) is 405.

Course Standards: Certified Nursing Assistant I

1. **GENERAL REQUIREMENTS.** This course is recommended for students in Grades 9-12, and there is no pre-requisite.

2. **INTRODUCTION**
   A. Career and Technical Education (CTE) instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.
   B. The Health and Human Services Career Cluster promotes whole health in individuals and communities through diverse services. This sector includes technical, mental, and therapeutic services and personal care supported by medical and social sciences. By addressing social determinants of health and leveraging health data and science, this Cluster aims to enhance the overall health and resilience of individuals, families, and communities.
   C. The Certified Nursing Assistant Program of Study emphasizes the development of foundational healthcare knowledge, advanced patient care skills, and clinical expertise. Students gain hands-on experience through classroom instruction, laboratory simulations, and work-based learning opportunities in real-world healthcare environments. By addressing social determinants of health, leveraging healthcare technologies, and fostering ethical and legal responsibilities, students are prepared to meet the challenges of modern healthcare delivery. Students will meet the **Maryland Board of Nursing's certification requirements** and be eligible to sit for MBON CNA I certification. This program also equips students to transition into advanced healthcare roles or postsecondary pathways, including Licensed Practical Nursing (LPN), Registered Nursing (RN), or other healthcare specialties.
   D. Certified Nursing Assistant I introduces students to the foundational knowledge and skills required to pursue a career in healthcare. Students will gain an understanding of healthcare systems, patient care practices, medical terminology, and safety protocols. Through classroom instruction and hands-on practice, students will learn to measure vital signs, provide basic patient care, and understand the principles of infection control. Emphasis is placed on developing professionalism, communication, and ethical decision-making. This course prepares students to progress into Certified Nursing Assistant II, where they will complete the MBON CNA I certification requirements.
   E. Students will participate in at least two Career-Connected Education and Work-Based Learning experiences in this course, which might include informational interviews or job shadowing relevant to the program of study.
   F. Students are encouraged to participate in extended learning experiences through aligned Career and Technical Student Organizations (CTSOs). CTSOs are a cocurricular requirement in the Carl D. Perkins Act, and alignment to CTSO activities is an expectation for CTE programs in the state of Maryland.

3. **KNOWLEDGE AND SKILLS**

   A. The student demonstrates the necessary skills for career development, maintenance of employability, and successful completion of course outcomes. The student is expected to:
      1. Identify and demonstrate positive work behaviors that enhance employability and job advancement, such as regular attendance, promptness, proper attire, maintenance of a clean and safe work environment, and pride in work.

2. Demonstrate positive personal qualities such as flexibility, open-mindedness, initiative, active listening, and a willingness to learn.
3. Employ effective reading, writing, and technical documentation skills.
4. Solve problems using critical thinking techniques and structured troubleshooting methodologies.
5. Demonstrate leadership skills and collaborate effectively as a team member.
6. Implement safety procedures, including proper use of software and following privacy guidelines.
7. Exhibit an understanding of legal and ethical responsibilities in the healthcare field, following copyright laws and regulations.
8. Demonstrate time-management skills and the ability to prioritize tasks in a technical setting.

B. The student identifies various career pathways in the healthcare field. The student is expected to:

1. Develop a career plan that includes the necessary education, certifications, job skills, and experience for specific roles in healthcare.
2. Create a professional resume and portfolio that reflect skills, projects, certifications, and recommendations.
3. Demonstrate effective interview skills for roles in healthcare fields.

C. The student develops technology and digital literacy skills. The student is expected to:

1. Use technology as a tool for research, organization, communication, and problem-solving.
2. Use digital tools, including computers, mobile devices, collaboration platforms, and cloud services, to access, manage, and create information.
3. Demonstrate proficiency in using emerging and industry-standard technologies.
4. Understand ethical and legal considerations for technology use, including the principles of data protection, copyright, and responsible technology use.

D. The student integrates core academic skills into healthcare practices. The student is expected to:

1. Demonstrate the use of clear communication techniques, both written and verbal, that are consistent with industry standards.
2. Apply English concepts such as writing informative texts when documenting healthcare plans and articulating goals.
3. Use mathematical concepts for measurement and conversion (Fahrenheit vs. Celsius), ratios and proportions as well as fraction and decimal conversions.

E. The student demonstrates foundational knowledge of healthcare systems and careers in the Health and Biosciences Cluster. The student is expected to:

1. Identify the therapeutic, diagnostic, environmental, and informational systems of the healthcare industry.
2. Evaluate career pathways in the Health and Biosciences Cluster, including entry-level and advanced roles in healthcare.
3. Examine the history, economics, and current trends in the healthcare industry, including their impact on healthcare delivery.
4. Investigate professional and personal qualities essential for success in healthcare careers.

F. The student demonstrates knowledge of human anatomy, physiology, and pathophysiology as it relates to patient care. The student is expected to:

1. Explain the basic structure and functions of major human body systems in health and illness.
2. Identify the signs, symptoms, and care considerations for common diseases and disorders.
3. Apply concepts of anatomy and physiology to real-world scenarios, including patient assessments and care planning.
4. Use medical terminology accurately to describe human anatomy, conditions, and procedures.

G. The student demonstrates the ability to provide safe and effective care in a healthcare environment. The student is expected to:

1. Maintain a safe environment for patients, healthcare providers, and visitors by following safety and emergency protocols.
2. Perform techniques related to infection control, including proper hand hygiene, use of personal protective equipment (PPE), and waste disposal.
3. Identify various pathogenic microorganisms, modes of transmission, and strategies for preventing healthcare-associated infections (HAIs).
4. Demonstrate basic first aid skills and obtain first aid certification from a recognized organization, such as the American Heart Association.

H. The student demonstrates proficiency in technical procedures used in healthcare settings. The student is expected to:

1. Accurately measure and record vital signs, including temperature, pulse, respiration, and blood pressure.
2. Perform basic patient care tasks, including bathing, grooming, toileting, and feeding, while maintaining patient dignity.
3. Assist with mobility and positioning techniques, including transferring patients and using assistive devices.
4. Administer basic restorative care, such as range-of-motion exercises and skin integrity maintenance.
5. Apply mathematical operations and calculations related to healthcare, such as medication dosages and fluid intake/output measurements.

I. The student demonstrates knowledge of ethical and legal responsibilities in healthcare. The student is expected to:

1. Analyze ethical considerations in healthcare, including patient confidentiality, autonomy, and informed consent.
2. Demonstrate knowledge of legal responsibilities, including adherence to scope of practice, reporting requirements, and healthcare laws such as HIPAA.
3. Evaluate case studies to make informed decisions regarding ethical and legal challenges in healthcare.

J. The student demonstrates understanding and application of healthcare technologies and resources. The student is expected to:

1. Use medical technologies and electronic health records (EHR) to document patient care and access healthcare information.
2. Evaluate research reports, media, and scientific studies related to healthcare issues and advancements.
3. Explore the role of health data and evidence-based practices in improving patient outcomes and healthcare delivery.

K. The student demonstrates readiness to apply healthcare concepts to real-world patient care scenarios. The student is expected to:

1. Apply science concepts in the assessment and delivery of medical and healthcare services.
2. Simulate basic nursing assistant procedures in a controlled environment, preparing for clinical practice.
3. Engage in clinical decision-making by analyzing patient conditions and identifying appropriate interventions.
4. Integrate academic and technical skills to address scenarios involving therapeutic, diagnostic, and preventive healthcare services.

Course Standards: Certified Nursing Assistant II

1. **GENERAL REQUIREMENTS.** This course is recommended for students in Grades 10-12, and Certified Nursing Assistant I is the prerequisite.

2. **INTRODUCTION**
   A. Career and Technical Education (CTE) instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.
   B. The Health and Human Services Career Cluster promotes whole health in individuals and communities through diverse services. This sector includes technical, mental, and therapeutic services and personal care supported by medical and social sciences. By addressing social determinants of health and leveraging health data and science, this Cluster aims to enhance the overall health and resilience of individuals, families, and communities.
   C. The Certified Nursing Assistant Program of Study emphasizes the development of foundational healthcare knowledge, advanced patient care skills, and clinical expertise. Students gain hands-on experience through classroom instruction, laboratory simulations, and work-based learning opportunities in real-world healthcare environments. By addressing social determinants of health, leveraging healthcare technologies, and fostering ethical and legal responsibilities, students are prepared to meet the challenges of modern healthcare delivery. Students will meet the **Maryland Board of Nursing's certification requirements** and be eligible to sit for MBON CNA I certification. This program also equips students to transition into advanced healthcare roles or postsecondary pathways, including Licensed Practical Nursing (LPN), Registered Nursing (RN), or other healthcare specialties.
   D. Certified Nursing Assistant II builds on the foundational skills from Certified Nursing Assistant I, focusing on advanced patient care techniques and preparation for certification as an MBON Certified Nursing Assistant I (CNA-I), which includes Geriatric Nursing Assistant skills. Students will complete clinical training in supervised healthcare settings, gaining real-world experience providing care to diverse patient populations, including the elderly. Topics include geriatric care, restorative care, palliative care, and preparation for state competency evaluations. By the end of this course, students will meet the Maryland Board of Nursing requirements and be eligible to sit for the CNA I certification exam.
   E. Students will participate in at least two Career-Connected Education and Work-Based Learning experiences in this course, which might include informational interviews or job shadowing relevant to the program of study.
   F. Students are encouraged to participate in extended learning experiences through aligned Career and Technical Student Organizations (CTSOs). CTSOs are a cocurricular requirement in the Carl D. Perkins Act, and alignment to CTSO activities is an expectation for CTE programs in the state of Maryland.

3. **KNOWLEDGE AND SKILLS**
   A. The student demonstrates the necessary skills for career development, maintenance of employability, and successful completion of course outcomes. The student is expected to:
      1. Identify and demonstrate positive work behaviors that enhance employability and job advancement, such as regular attendance, promptness, proper attire, maintenance of a clean and safe work environment, and pride in work.

2. Demonstrate positive personal qualities such as flexibility, open-mindedness, initiative, active listening, and a willingness to learn.
3. Employ effective reading, writing, and technical documentation skills.
4. Solve problems using critical thinking techniques and structured troubleshooting methodologies.
5. Demonstrate leadership skills and collaborate effectively as a team member.
6. Implement safety procedures, including proper use of software and following privacy guidelines.
7. Exhibit an understanding of legal and ethical responsibilities in the healthcare field.
8. Demonstrate time-management skills and the ability to prioritize tasks in a technical setting.

B. The student identifies various career pathways in the healthcare field. The student is expected to:

1. Develop a career plan that includes the necessary education, certifications, job skills, and experience for specific roles in healthcare.
2. Create a professional resume and portfolio that reflect skills, projects, certifications, and recommendations.
3. Demonstrate effective interview skills for roles in healthcare fields.

C. The student develops technology and digital literacy skills. The student is expected to:

1. Use technology as a tool for research, organization, communication, and problem-solving.
2. Use digital tools, including computers, mobile devices, collaboration platforms, and cloud services, to access, manage, and create information.
3. Demonstrate proficiency in using emerging and industry-standard technologies.
4. Understand ethical and legal considerations for technology use, including the principles of data protection, copyright, and responsible technology use.

D. The student integrates core academic skills into healthcare practices. The student is expected to:

1. Demonstrate the use of clear communication techniques, both written and verbal, that are consistent with industry standards.
2. Apply English concepts such as writing informative texts when documenting healthcare plans and articulating goals.
3. Use mathematical concepts for measurement and conversion (Fahrenheit vs. Celsius), ratios and proportions as well as fraction and decimal conversions.

E. The student demonstrates advanced nursing assistant skills necessary for certification as a Certified Nursing Assistant I (CNA-I), including skills required for Geriatric Nursing Assistant (GNA) certification. The student is expected to:

1. Master basic patient care skills, including bathing, grooming, dressing, toileting, and feeding, ensuring patient comfort and dignity.
2. Accurately measure and record vital signs, height, weight, intake, and output using appropriate techniques and equipment.
3. Implement infection prevention and control practices, including proper hand hygiene, isolation procedures, and use of personal protective equipment (PPE).
4. Practice patient mobility techniques, such as safe transferring, ambulation assistance, and proper use of mechanical lifts.

5. Effectively communicate patient observations, changes in condition, and care updates to supervising nurses and healthcare team members.

F. The student demonstrates proficiency in skills required for care in long-term care facilities and geriatric settings. The student is expected to:

1. Provide care for patients with cognitive impairments, including those with dementia or Alzheimer's disease, using person-centered approaches.
2. Assist patients with restorative care, including range-of-motion exercises, positioning, and use of assistive devices.
3. Address emotional and psychosocial needs of elderly patients, promoting social engagement and overall quality of life.
4. Perform advanced care tasks such as catheter care, colostomy maintenance, and caring for patients with feeding tubes.
5. Demonstrate palliative and end-of-life care skills, including comfort measures, emotional support, and postmortem care.

G. The student demonstrates the ability to perform specialized nursing assistant skills necessary to pass the GNA competency examination. The student is expected to:

1. Follow detailed care plans and accurately complete tasks required for state-mandated long-term care competency evaluations.
2. Assist patients with mealtime activities, ensuring proper feeding techniques and adherence to dietary restrictions.
3. Demonstrate proper positioning and bed-making skills for patient comfort and pressure ulcer prevention.
4. Perform comprehensive bathing techniques, including bed baths, showers, and perineal care, while respecting patient privacy.
5. Apply knowledge of geriatric care to effectively monitor and document changes in condition, behavior, and response to care.

H. The student demonstrates mastery of clinical and technical skills to pass the CNA-I competency examination. The student is expected to:

1. Safely perform patient care tasks such as measuring blood glucose, applying compression stockings, and assisting with oxygen therapy.
2. Prepare patients for diagnostic procedures, maintaining proper safety protocols and comfort measures.
3. Utilize health technology, including electronic health records (EHR) and medical equipment, in compliance with HIPAA and safety regulations.
4. Demonstrate safe handling of biohazardous materials, including proper disposal of medical waste and sharps.
5. Respond to medical emergencies by applying basic first aid and CPR techniques as needed.

I. The student demonstrates readiness for MBON CNA certification which includes both skill sets for a CNA and GNA. The student is expected to:

1. Complete a minimum of 60 hours of supervised clinical training in long-term care facilities, focusing on skills required for the MBON CNA-I certification.
2. Participate in mock clinical evaluations simulating GNA and CNA examination requirements.

3. Develop and maintain a clinical skills checklist to track progress in meeting competency standards.
4. Practice test-taking strategies for the CNA-I certification exams, focusing on both written knowledge and practical skills.
5. Exhibit professionalism, empathy, and ethical conduct in all clinical settings, meeting the standards of the Maryland Board of Nursing.

J. The student applies critical thinking and problem-solving skills to enhance patient care outcomes. The student is expected to:

1. Identify and address patients' needs in a variety of healthcare scenarios, adapting techniques to specific situations.
2. Recognize symptoms of common diseases and conditions, including their implications for care planning and interventions.
3. Analyze social determinants of health and propose solutions to improve patient well-being.
4. Collaborate with interdisciplinary healthcare teams to develop patient-centered care plans.
5. Evaluate patient progress and adjust care strategies to meet changing health needs.

Course Standards: Certified Nursing Assistant III

1. **GENERAL REQUIREMENTS.** This course is recommended for students in Grades 10-12, and Certified Nursing Assistant I and II are the prerequisites.

2. **INTRODUCTION**

   A. Career and Technical Education (CTE) instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.
   B. The Health and Human Services Career Cluster promotes whole health in individuals and communities through diverse services. This sector includes technical, mental, and therapeutic services and personal care supported by medical and social sciences. By addressing social determinants of health and leveraging health data and science, this Cluster aims to enhance the overall health and resilience of individuals, families, and communities.
   C. The Certified Nursing Assistant Program of Study emphasizes the development of foundational healthcare knowledge, advanced patient care skills, and clinical expertise. Students gain hands-on experience through classroom instruction, laboratory simulations, and work-based learning opportunities in real-world healthcare environments. By addressing social determinants of health, leveraging healthcare technologies, and fostering ethical and legal responsibilities, students are prepared to meet the challenges of modern healthcare delivery. Students will meet the Maryland Board of Nursing's certification requirements and be eligible to sit for MBON CNA I certification. This program also equips students to transition into advanced healthcare roles or postsecondary pathways, including Licensed Practical Nursing (LPN), Registered Nursing (RN), or other healthcare specialties.
   D. Certified Nursing Assistant III course focuses on the structure and functions of the human body to provide students with the advanced knowledge needed to deliver effective patient care. Students will explore the relationships between anatomy, physiology, and disease, with emphasis on homeostasis, pathophysiology, and responses to the external environment. Laboratory investigations and the use of medical technologies will prepare students to analyze diagnostic data, understand therapeutic interventions, and apply science concepts in clinical scenarios. This course is ideal for students preparing to enter Licensed Practical Nursing (LPN) programs or other advanced healthcare pathways.
   E. Students will participate in at least two Career-Connected Education and Work-Based Learning experiences in this course, which might include informational interviews or job shadowing relevant to the program of study.
   F. Students are encouraged to participate in extended learning experiences through aligned Career and Technical Student Organizations (CTSOs). CTSOs are a co-curricular requirement in the Carl D. Perkins Act, and alignment to CTSO activities is an expectation for CTE programs in the state of Maryland.

3. **KNOWLEDGE AND SKILLS**

   A. The student demonstrates the necessary skills for career development, maintenance of employability, and successful completion of course outcomes. The student is expected to:
      1. Identify and demonstrate positive work behaviors that enhance employability and job advancement, such as regular attendance, promptness, proper attire, maintenance of a clean and safe work environment, and pride in work.

2. Demonstrate positive personal qualities such as flexibility, open-mindedness, initiative, active listening, and a willingness to learn.
3. Employ effective reading, writing, and technical documentation skills.
4. Solve problems using critical thinking techniques and structured troubleshooting methodologies.
5. Demonstrate leadership skills and collaborate effectively as a team member.
6. Implement safety procedures, including proper use of software and following privacy guidelines.
7. Exhibit an understanding of legal and ethical responsibilities in the healthcare field.
8. Demonstrate time-management skills and the ability to prioritize tasks in a technical setting.

B. The student identifies various career pathways in the healthcare field. The student is expected to:

1. Develop a career plan that includes the necessary education, certifications, job skills, and experience for specific roles in healthcare.
2. Create a professional resume and portfolio that reflect skills, projects, certifications, and recommendations.
3. Demonstrate effective interview skills for roles in healthcare fields.

C. The student develops technology and digital literacy skills. The student is expected to:

1. Use technology as a tool for research, organization, communication, and problem-solving.
2. Use digital tools, including computers, mobile devices, collaboration platforms, and cloud services, to access, manage, and create information.
3. Demonstrate proficiency in using emerging and industry-standard technologies.
4. Understand ethical and legal considerations for technology use, including the principles of data protection, copyright, and responsible technology use.

D. The student integrates core academic skills into healthcare practices. The student is expected to:

1. Demonstrate the use of clear communication techniques, both written and verbal, that are consistent with industry standards.
2. Apply English concepts such as writing informative texts when documenting healthcare plans and articulating goals.
3. Use mathematical concepts for measurement and conversion (Fahrenheit vs. Celsius), ratios and proportions as well as fraction and decimal conversions.

E. The student demonstrates advanced understanding of the structure and functions of the human body in the context of nursing and healthcare. The student is expected to:

1. Analyze the relationships between the anatomical structures and physiological functions of human body systems and their connection to health and disease.
2. Evaluate the effects of disease, trauma, and congenital defects on cells, tissues, organs, and systems.
3. Use directional terms, anatomical planes, and body cavities to describe the organization of the human body and its systems.
4. Examine the interdependence of body systems in maintaining homeostasis and responding to internal and external stimuli.

F. The student demonstrates proficiency in applying medical and scientific knowledge to healthcare services. The student is expected to:

1. Investigate the chemical and physical processes that occur within the human body, including metabolism, energy transfer, and electrical interactions.
2. Conduct laboratory investigations and apply scientific methods to solve healthcare-related problems and make informed decisions.
3. Analyze the impact of environmental factors, such as toxins and pathogens, on the human body's systems and health.
4. Explain the role of transport systems in the body, including circulatory, lymphatic, and respiratory functions.

G. The student demonstrates the use of medical terminology related to body systems in healthcare contexts. The student is expected to:

1. Accurately define and effectively use medical vocabulary related to anatomical structures, physiological functions, and diseases.
2. Transcribe medical terms in clinical scenarios and patient documentation accurately and efficiently.
3. Interpret diagnostic reports and medical records using relevant medical terminology.
4. Communicate anatomical and physiological information using precise medical language.

H. The student demonstrates the ability to integrate scientific and healthcare knowledge in clinical practice. The student is expected to:

1. Implement investigative procedures, including posing questions, formulating hypotheses, and using appropriate diagnostic methods and technologies.
2. Apply principles of cellular biology and histology to assess and understand disease processes.
3. Use diagnostic and therapeutic technologies accurately, including imaging systems, laboratory tests, and monitoring devices.
4. Organize, analyze, and interpret data from patient assessments to predict trends and make clinical decisions.

I. The student analyzes the historical, cultural, and global context of healthcare delivery. The student is expected to:

1. Compare and contrast the historical significance of medicine with current practices and future advancements.
2. Examine cultural and lifespan considerations in healthcare delivery, including their impact on patient care and outcomes.
3. Analyze global healthcare issues, including regulatory frameworks and challenges in delivering equitable care.
4. Predict future trends in healthcare, including advancements in technology and their implications for patient care.

J. The student demonstrates the ability to evaluate and address healthcare challenges using systems thinking. The student is expected to:

1. Construct general systems models using inputs, throughputs, and feedback loops to represent physiological processes.
2. Analyze the interconnectedness of body systems and their roles in maintaining overall health.
3. Evaluate healthcare delivery systems, regulatory agencies, and their role in improving patient outcomes in a global economy.
4. Propose solutions to healthcare challenges using evidence-based strategies and interdisciplinary approaches.

K. The student demonstrates readiness for advanced nursing programs and future healthcare careers. The student is expected to:

1. Apply knowledge of anatomy, physiology, and pathophysiology in clinical simulations and real-world scenarios.
2. Synthesize concepts from biology, chemistry, and physics to enhance understanding of human body functions.
3. Explore career pathways in healthcare, including the progression from CNA to LPN, RN, or other advanced roles.
4. Develop a professional portfolio that highlights laboratory investigations, clinical skills, and knowledge of human body systems.

Course Standards: Career Connected Learning I and II

Career connected learning is an educational approach that integrates classroom instruction with real-world experiences, enabling high school students to explore potential careers and develop relevant skills before graduation. By participating in work-based learning opportunities—such as apprenticeships, internships, capstone projects, and school-based enterprises—students apply academic concepts in authentic settings, gain practical industry knowledge, and build professional networks. This hands-on engagement helps students connect their studies to future career paths, strengthens their problem-solving and communication skills, and supports a smoother transition into college, vocational programs, or the workforce.

All Career and Technical Education Programs of Study include aspects of work-based learning, and almost all of the programs include two Career Connected Learning (CCL) courses. Below are the course descriptions for CCL I and CCL II. The CCL standards can be found via this link: