Maryland CTE Programs of Study

Certified Clinical Medical Assistant III (2025)

GENERAL REQUIREMENTS. This course is recommended for students in Grades 11-12, and the Certified Clinical Medical Assistant I and II are prerequisites. 1

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INTRODUCTION 2

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. 2.A

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. 2.B

C The Certified Clinical Medical Assistant Program of Study prepares high school students with essential clinical and administrative skills. Students practice hands-on tasks such as measuring vital signs, performing diagnostic tests, administering medications under supervision, and managing patient records. The course also introduces the basics of pharmacology and medical office operations, ensuring students are prepared for a dual role in clinical and administrative healthcare settings. Key topics addressed are infection control and biohazard safety in clinical environments; measuring and documenting vital signs (temperature, pulse, respiration, blood pressure, BMI); clinical procedures: phlebotomy, electrocardiography (ECG), and specimen collection; basics of pharmacology: drug classifications, common medications, and administration methods; and administrative tasks: electronic health records (EHR), appointment scheduling, and billing basics. Students will be prepared to successfully pass the National Healthcareer Association's (NHA) Certified Clinical Medical Assistant exam. 2.C

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Certified Clinical Medical 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 for advanced healthcare pathways. 2.D

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.** 2.E

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.** 2.F

KNOWLEDGE AND SKILLS 3

A **The student demonstrates the necessary skills for career development, maintenance of employability, and successful completion of course outcomes. The student is expected to:** 3.A

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. 3.A.1
2. Demonstrate positive personal qualities such as flexibility, open-mindedness, initiative, active listening, and a willingness to learn. 3.A.2
3. Employ effective reading, writing, and technical documentation skills. 3.A.3
4. Solve problems using critical thinking techniques and structured troubleshooting methodologies. 3.A.4
5. Demonstrate leadership skills and collaborate effectively as a team member. 3.A.5
6. Implement safety procedures, including proper use of software and following privacy guidelines. 3.A.6
7. Exhibit an understanding of legal and ethical responsibilities in the healthcare field, following copyright laws and regulations. 3.A.7
8. Demonstrate time-management skills and the ability to prioritize tasks in a technical setting. 3.A.8

B **The student identifies various career pathways in the healthcare field. The student is expected to:** 3.B

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

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C **The student develops technology and digital literacy skills. The student is expected to:** 3.C

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

D **The student integrates core academic skills into healthcare practices. The student is expected to:** 3.D

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

E **The student demonstrates advanced understanding of the structure and functions of the human body in the context of healthcare. The student is expected to:** 3.E

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

F **The student demonstrates proficiency in applying medical and scientific knowledge to healthcare services. The student is expected to:** 3.F

1. Explain the chemical, physical, and biological processes that support body function, including metabolism, energy transfer, electrical activity, and the role of cells and tissues in disease. 3.F.1
2. Apply diagnostic reasoning by using scientific methods, laboratory investigations, and appropriate healthcare technologies to assess patient conditions and solve clinical problems. 3.F.2
3. Analyze the effects of environmental factors—such as toxins, pathogens, and pollutants—on human health and the development of disease. 3.F.3

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4 Describe the structure and function of major transport systems (circulatory, respiratory, and lymphatic) and their role in maintaining homeostasis and supporting patient care 3.F.4

G The student demonstrates the use of medical terminology related to body systems in healthcare contexts. The student is expected to: 3.G

1 Accurately define and effectively use medical vocabulary related to anatomical structures, physiological functions, and diseases. 3.G.1

2 Apply appropriate medical terminology in clinical scenarios and patient documentation accurately and efficiently. 3.G.2

3 Interpret diagnostic reports and medical records using relevant medical terminology. 3.G.3

4 Communicate anatomical and physiological information using precise medical language. 3.G.4

H The student analyzes the historical, cultural, and global context of healthcare delivery. The student is expected to: 3.H

1 Compare and contrast the historical significance of medicine with current practices and future advancements. 3.H.1

2 Examine cultural and lifespan considerations in healthcare delivery, including their impact on patient care and outcomes. 3.H.2

3 Analyze global healthcare issues, including regulatory frameworks and challenges in delivering equitable care. 3.H.3

4 Predict future trends in healthcare, including advancements in technology and their implications for patient care. 3.H.4

I The student demonstrates the ability to evaluate and address healthcare challenges using systems thinking. The student is expected to: 3.I

1 Construct general systems models using inputs, throughputs, and feedback loops to represent physiological processes. 3.I.1

2 Analyze the interconnectedness of body systems and their roles in maintaining overall health. 3.I.2

3 Evaluate healthcare delivery systems, regulatory agencies, and their role in improving patient outcomes in a global economy. 3.I.3

4 Propose solutions to healthcare challenges using evidence-based strategies and interdisciplinary approaches. 3.I.4

J The student demonstrates readiness for advanced healthcare careers. The student is expected to: 3.J

1 Apply knowledge of anatomy, physiology, and pathophysiology in clinical simulations and real-world scenarios. 3.J.1

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Synthesize concepts from biology, chemistry, and physics to enhance understanding of human body functions. 3.J.2

3 Explore career pathways in healthcare, including CNA, LPN, RN, or other advanced healthcare roles. 3.J.3

4 Develop a professional portfolio that highlights laboratory investigations, clinical skills, and knowledge of human body systems. 3.J.4