



Program of Study Guide:

Dental Assistant

Comprehensive guidelines and course standards
for the Dental Assistant

Office of College and Career Pathways

August 2025

MARYLAND STATE DEPARTMENT OF EDUCATION

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Purpose

The purpose of this document is to communicate the required Career and Technical Education (CTE) academic standards for the Dental 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 State Board Dental Examiners (MSBDE) Standards, and Dental Assisting National Board (DANB) Certification Standards, 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

Dental 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 Dental 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 State Board of Dental Examiners (MSBDE) Standards**
 - A. **Description:** The MSBDE oversees dental assisting qualifications in Maryland, including state-specific certifications like the Maryland General Dental Assisting Qualified Functions (MDG) and Dental Radiation Technologist Certification.
 - B. **Usage:** The program standards incorporate Maryland's regulatory requirements, ensuring students meet state licensure and certification criteria for dental assisting.
 - C. **Source:** Maryland State Board of Dental Examiners
2. **Dental Assisting National Board (DANB) Certification Standards**
 - A. **Description:** The DANB provides national certification for dental assistants, including exams such as Radiation Health and Safety (RHS), Infection Control (ICE), General Chairside (GC), and state-specific certifications like the Maryland General Dental Assisting Qualified Functions (MDG).
 - B. **Usage:** DANB standards guide the curriculum and assessment design to prepare students for nationally recognized dental assisting certifications.
 - C. **Source:** [DANB Certification Information](#)
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. **Usage:** The framework provides a foundation for aligning the Dental Assistant program to broader healthcare career pathways and industry expectations.
 - C. **Source:** Advance CTE Career Clusters.
4. **American Heart Association (AHA) Basic Life Support (BLS) Certification Standards**
 - A. **Description:** The American Heart Association (AHA) provides certification for Basic Life Support (BLS), focusing on CPR, AED usage, and emergency response protocols.
 - B. **Usage:** BLS certification is included in Dental Assistant I to equip students with life-saving skills applicable in healthcare settings.
 - C. **Source:** AHA Basic Life Support Certification
5. **Occupational Safety and Health Administration (OSHA) Healthcare Workplace Standards**
 - A. **Description:** OSHA sets guidelines for workplace safety, including infection control, PPE usage, and hazard communication in healthcare environments.
 - B. **Usage:** OSHA standards inform the infection control and workplace safety components of the curriculum across all courses.
 - C. **Source:** OSHA Healthcare Standards

6. **Center for Disease Control and Prevention (CDC) Infection Control Guidelines**

- A. **Description:** The CDC provides guidelines for infection prevention and control, emphasizing sterilization, disinfection, and safe handling of materials in healthcare settings.
- B. **Usage:** These guidelines are integrated into infection control training in all courses to ensure compliance with best practices.
- C. **Source:** [CDC Infection Control Guidelines](#)

Course Descriptions

Course Level	Course Information	Description
Required Core: Course 1	Dental Assistant I SCED: Pending Grades: 9-12 Prerequisite: None Credit: 1	Dental Assistant I introduces students to dental assisting. Students learn dental team roles and ethics, dental terminology, tooth anatomy and numbering systems, basic chairside concepts (four-handed dentistry, ergonomics, moisture control), instrument identification, and infection prevention and control for dental settings. Students practice patient communication, medical history intake, and vital signs as used in dentistry. The course builds foundational radiography safety concepts that lead into RHS preparation in Course II and orients students to dental office workflows (HIPAA in dentistry, scheduling, and an overview of CDT coding). Students complete Basic Life Support (BLS).

Course Level	Course Information	Description
Required Core: Course 2	Dental Assistant II SCED: Pending Grades: 10-12 Prerequisite: Dental Assistant I Credit: 1	Dental Assistant II course builds on foundational course I in dental assisting, focusing on clinical applications and advanced skills. Students will deepen their understanding of dental anatomy, radiography, infection control, and chairside assisting techniques. This course emphasizes practical skills, including taking impressions, assisting with restorative procedures, and adhering to workplace safety protocols. Students will prepare for and take two key certifications: 1. Dental Assisting National Board Radiation Health and Safety (RHS) certification, demonstrating competency in radiographic procedures and safety. 2. Maryland General Dental Assisting Qualified Functions (MDG) certification, qualifying them to perform expanded dental assisting duties under Maryland regulations. By the end of this course, students will have gained the technical skills, knowledge, and certifications required to transition into advanced dental assisting roles and pursue work-based learning experiences in subsequent courses.
Optional Flex: Course 1	Dental Assistant III SCED: Pending Grades: 11-12 Prerequisite: Dental Assistant I and II Credit: 1	Dental Assistant III advances chairside assisting across specialties (endodontics, oral surgery, orthodontics, periodontics, prosthodontics) at a high-school level; coordinates infection prevention; leads radiography quality assurance and image evaluation; assists with dental materials/impressions; supports dental-office emergency readiness; and leads patient education/community outreach. Students compile a portfolio and prepare for additional DANB components (e.g., ICE, introductory GC) to complement RHS/MDG.

Course Level	Course Information	Description
Optional Flex: Course 2	Career Connected Learning I SCED: Pending Grades: 11-12 Prerequisite: See Course Description Credits: 1-3	<u>Prerequisites:</u> 1. Alignment to the student's 6-Year Plan 2. Completion of: a. Minimum two sequential courses in a CTE pathway, OR b. Minimum two years of the same world language; OR c. Minimum two sequential courses in a comprehensive arts program; OR d. Inclusion in the IEP/504 transition plan with supporting documentation (as required) 3. Endorsement from an educator, mentor, employer, or career coach 4. No more than one course recovery credit in core subjects is needed by the student. 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 practices. 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.

Course Level	Course Information	Description
Optional Flex: Course 3	Career Connected Learning II SCED: Pending Grades: 11-12 Prerequisite: Career Connected Learning I Credits: 1-3	Building on the foundational experiences of Career Connected Learning I, this advanced work-based learning course provides students with deeper on-the-job practice, leadership opportunities, and refined career exploration. Students continue to enhance their technical and professional skills, expanding their industry networks and aligning personal goals with evolving career interests. Variable credit (1–3) remains aligned with the required training hours and related instruction. Through elevated responsibilities and skill application, Career Connected Learning II prepares students to confidently transition into higher-level postsecondary programs, apprenticeships, or the workforce.

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

Industry-Recognized Credentials and Career-Connected Learning

The *Blueprint for Maryland's Future* and the High School Level of a Registered Apprenticeship

The Maryland State Department of Education recognizes the high-school level of a Registered Apprenticeship (RA), defined as a State-approved Registered Apprenticeship begun during high school in which students complete at least 144 hours of related technical instruction and 250 hours of paid on-the-job training before graduation, with the remaining required apprenticeship hours completed post-graduation, as the gold standard of Career Connected Learning.

The CTE Committee of the Governor's Workforce Development Board, in alignment with federal apprenticeship standards, requires 144 hours of RTI for all high school RA participants, and the Apprenticeship Maryland Program (AMP) defines the minimum RTI as **one course credit equivalent**. This high-school-level Registered Apprenticeship is the preferred career-connected learning option for students to meet the Blueprint's goal that 45% of public high school graduates complete either the high-school level of a Registered Apprenticeship or another industry-recognized credential.

To the extent practicable, the greatest number of students should achieve this goal through participation in a high-school level Registered Apprenticeship, with schools ensuring these requirements are scheduled, completed, and documented for transcript and reporting purposes.

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Career-Connected Learning Resources		
Course 1: Career Awareness	Course 2: Career Preparation	Flex Courses: Career-Connected Learning
- 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 - Employer Mentoring	- Registered Apprenticeship - Internship - School-Based Enterprise - Employer-Directed Capstone

Industry-Recognized Credentials**By the end of Dental Assistant II:**

1. **Dental Assisting National Board Radiation Health and Safety (RHS)** certification, demonstrating competency in radiographic procedures and safety.
2. **Maryland General Dental Assisting Qualified Functions (MDG)** certification, qualifying them to perform expanded dental assisting duties under Maryland regulations.

Optional Credentials (via the Flex Course options): Dual Credit Options, Apprenticeships, Internships

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 Wage¹	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). <i>Note: A 25th percentile hourly wage of \$24.74 or greater is required to meet this definition.</i>	Standard Occupational Code: 31-9091: Dental Assistants in Maryland Hourly Wage/Annual Salary: 25 th Percentile: \$21.93 / \$45,614 50 th Percentile: \$23.21 / \$48,277 75 th Percentile: \$27.54 / \$57,283
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 <u>405</u> openings between 2024-2029.	Annual Openings 966

Lightcast Data Updated August 2025

¹ Living Wage Calculator: <https://livingwage.mit.edu/states/24>

Labor Market Information Data Source

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: Dental Assistant I

- 1. GENERAL REQUIREMENTS.** This course is recommended for students in Grades 9-12, and there are no 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 Dental Assistant Program of Study prepares students for careers in dental assisting and healthcare. Aligned with Advance CTE's Health and Human Services Career Cluster, the program develops foundational healthcare knowledge, specialized dental assisting skills, and hands-on experience through internships or apprenticeships. Students gain proficiency in infection control, chairside assisting, patient care, and administrative duties while exploring human anatomy and physiology. Students will be eligible to sit for the DANB Radiation Health and Safety (RHS) certification exam and the Maryland State Board of Dental Examiners Maryland General Dental Assisting Qualified Functions (MDG) certification exam.
- D. Dental Assistant I introduces students to dental assisting and prepares them to progress into the Dental Assistant II course, where they will complete the requirements for the DANB Radiation Health and Safety (RHS) certification and the Maryland State Board of Dental Examiners Maryland General Dental Assisting Qualified Functions (MDG) certification.
- 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 the 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 infection prevention and safety for dental settings. The student is expected to:

1. Apply CDC and OSHA guidelines for hand hygiene, PPE, operator asepsis, and environmental surface disinfection for dental treatment rooms.
2. Describe instrument flow (cleaning, packaging, sterilization), indicators, and spore testing at a student-appropriate level.
3. Identify sharps and regulated medical waste; follow exposure-incident reporting steps.

F. The student demonstrates basic dental anatomy, charting, and terminology. The student is expected to:

1. Identify tooth anatomy, surfaces, and common numbering systems (Universal/National, Palmer, ISO).
2. Record findings using standard dental chart symbols and abbreviations (intro level).

G. The student identifies and maintains basic dental instruments, materials, and equipment. The student is expected to:

1. Identify exam and restorative instrument setups; describe indications and safe handling.
2. Describe properties and aseptic handling of basic dental materials (e.g., alginate, gypsum) used for study casts.

H. The student applies chairside fundamentals in a simulated dental operatory. The student is expected to:

1. Prepare and break down the operatory; maintain ergonomics and principles of four-handed dentistry.
2. Demonstrate moisture control techniques (HVE, saliva ejector, cotton products, retraction) in simulation.

I. The student performs patient intake and dental communication tasks appropriate to scope. The student is expected to:

1. Collect/update medical history and medications; obtain/record vital signs used in dentistry.
2. Provide age-appropriate oral health education and basic pre/post-op instructions under guidance.
3. Use dental EHR/practice-management features for scheduling and basic chart entries (no diagnosis).

J. The student demonstrates introductory dental radiography concepts and safety (no exposures yet). The student is expected to:

1. Explain radiation basics, ALARA, patient shielding, and staff protection in a dental office.
2. Identify parts of intraoral imaging equipment and sensors/film; explain storage/handling and error-prevention.
3. Describe patient consent, documentation, and quality-assurance logs that will be practiced in DA II.

K. The student demonstrates professionalism and scope awareness specific to Maryland dental assisting. The student is expected to:

1. Describe Maryland supervision levels and the role of the dental assistant (high-school appropriate orientation).
2. Identify how DA I prepares for later DANB RHS and MSBDE MDG components in DA II.

Course Standards: Dental Assistant II

1. **GENERAL REQUIREMENTS.** This course is recommended for Grades 10-12 students, and Dental 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 Dental Assistant Program of Study prepares students for careers in dental assisting and healthcare. Aligned with Advance CTE's Health and Human Services Career Cluster, the program develops foundational healthcare knowledge, specialized dental assisting skills, and hands-on experience through internships or apprenticeships. Students gain proficiency in infection control, chairside assisting, patient care, and administrative duties while exploring human anatomy and physiology. Students will be eligible to sit for the DANB Radiation Health and Safety (RHS) certification exam and the Maryland State Board of Dental Examiners Maryland General Dental Assisting Qualified Functions (MDG) certification exam.
 - D. Dental Assistant II builds on foundational healthcare and dental assisting knowledge, focusing on clinical applications and advanced skills. Students will deepen their understanding of dental anatomy, radiography, infection control, and chairside assisting techniques. This course emphasizes practical skills, including taking impressions, assisting with restorative procedures, and adhering to workplace safety protocols. Students will prepare for and take two key certifications: Dental Assisting National Board Radiation Health and Safety (RHS) certification, demonstrating competencies in radiographic procedures and safety and the Maryland General Dental Assisting Qualified Functions (MDG) certification.
 - 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 advanced knowledge and application of infection control and workplace safety in dental settings. The student is expected to:

1. Apply OSHA and CDC guidelines for infection control and workplace safety, including proper sterilization, disinfection, and hazardous material handling.
2. Implement protocols for managing biohazardous waste, maintaining instrument sterility, and using personal protective equipment (PPE).
3. Evaluate infection control procedures for effectiveness and compliance with regulatory standards.

F. The student demonstrates proficiency in radiographic procedures and safety practices for dental assisting. The student is expected to:

1. Understand the principles of radiation physics, radiographic imaging, and biological effects of radiation exposure.
2. Demonstrate competency in positioning, exposing, and processing dental radiographs.
3. Troubleshoot common radiographic errors and correct techniques to improve imaging outcomes.
4. Mount a complete intraoral series and maintain a radiography quality-assurance log (exposure settings, retakes, corrective action).
5. Adhere to safety measures to protect patients and staff, including the use of protective barriers and dosimeters.

G. The student demonstrates advanced skills in performing expanded functions as a dental assistant as permitted under MSBDE regulations and required supervision. The student is expected to:

1. Take alginate impressions for diagnostic models, study casts, and intraoral appliances.
2. Perform coronal polishing and apply fluoride treatments under supervision.
3. Prepare, place, and remove temporary restorations and crowns, ensuring patient comfort and procedural accuracy.
4. Assist with placing and removing matrix bands, wedges, and retraction cords during restorative procedures.
5. Construct custom trays and athletic mouthguards for patients.

H. The student demonstrates understanding of dental anatomy, morphology, and pathology. The student is expected to:

1. Identify and describe the anatomy of teeth, oral structures, and supporting tissues.
2. Analyze common dental pathologies, including caries, periodontal disease, and malocclusion, and their implications for treatment.
3. Use dental morphology knowledge to assist in diagnosing and planning treatment for patients.

I. The student demonstrates effective patient care and communication skills. The student is expected to:

1. Provide patient education on oral hygiene practices, pre- and post-treatment instructions, and preventive care.
2. Demonstrate professional and empathetic communication techniques when interacting with patients of diverse cultural and developmental backgrounds.
3. Accurately document patient information and care plans using dental terminology and electronic health records.

J. The student integrates advanced scientific and critical thinking skills into dental assisting practices. The student is expected to:

1. Apply principles of human anatomy, physiology, and chemistry to analyze and deliver dental care services.
2. Evaluate case studies to identify appropriate treatment options and expanded function procedures.
3. Solve clinical challenges through critical thinking and decision-making skills in simulated and real-world settings.

K. The student prepares for industry-recognized certifications and demonstrates readiness for professional practice. The student is expected to:

1. Review competencies required for the Maryland General Dental Assisting Qualified Functions (MDG) Exam, including expanded function skills such as temporary restorations and fluoride application.
2. Practice and refine radiographic skills and safety measures in preparation for the Dental Assisting National Board (DANB) Radiation Health and Safety (RHS) Exam.
3. Complete mock exams and practical assessments aligned with both certification requirements.

Course Standards: Dental Assistant III

1. **GENERAL REQUIREMENTS.** This course is recommended for students in Grades 11-12 and Dental 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 Dental Assistant Program of Study prepares students for careers in dental assisting and healthcare. Aligned with Advance CTE's Health and Human Services Career Cluster, the program develops foundational healthcare knowledge, specialized dental assisting skills, and hands-on experience through internships or apprenticeships. Students gain proficiency in infection control, chairside assisting, patient care, and administrative duties while exploring human anatomy and physiology. Students will be eligible to sit for the DANB Radiation Health and Safety (RHS) certification exam and the Maryland State Board of Dental Examiners Maryland General Dental Assisting Qualified Functions (MDG) certification exam.
 - B. Dental Assistant III advances chairside assisting across specialties (endodontics, oral surgery, orthodontics, periodontics, prosthodontics) at a high-school level; coordinates infection prevention; leads radiography quality assurance and image evaluation; assists with dental materials/impressions; supports dental-office emergency readiness; and leads patient education/community outreach. Students compile a portfolio and prepare for additional DANB components (e.g., ICE, introductory GC) to complement RHS/MDG.
 - C. 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.
 - D. 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, following copyright laws and regulations.
8. Demonstrate time-management skills and the ability to prioritize tasks in a technical setting.

A. 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.

B. 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.

C. 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.

D. The student demonstrates advanced understanding of the structure and functions of the human body in the context of 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.

E. 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.

F. 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.

G. 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.

H. 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.

I. 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.

J. The student demonstrates readiness for Dental Assisting 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 other advanced roles.
4. Develop a professional portfolio that highlights laboratory investigations, clinical skills, and knowledge of human body systems.