Georgia CTAE

Applications of Dental Science (2024)

Demonstrate employability skills required by business and industry. HS-ADS-1	1 **Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.** HS-ADS-1.1
	2 **Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.** HS-ADS-1.2
	3 **Exhibit critical thinking and problem-solving skills to locate, analyze and apply information in career planning and employment situations.** HS-ADS-1.3
	4 **Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.** HS-ADS-1.4
	5 **Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply teamwork skills.** HS-ADS-1.5
	6 **Present a professional image through appearance, behavior, and language.** HS-ADS-1.6
Distinguish between different dental specialties and the instruments/equipment used. HS-ADS-2	1 **Describe the role of general dentistry and explain the various services provided.** HS-ADS-2.1
	2 **Compare and contrast pediatric dentistry with family dentistry.** HS-ADS-2.2
	3 **Explain the role of orthodontics and services provided.** HS-ADS-2.3
	4 **Explain the role of prosthodontics and services provided.** HS-ADS-2.4
	5 **Explain the role of periodontics and services provided.** HS-ADS-2.5
	6 **Explain the role of endodontics and services provided.** HS-ADS-2.6
	7 **Explain the need for oral and maxillofacial surgery.** HS-ADS-2.7
Investigate the laws, reg co dental fields. HS-ADS-3	1 **Describe ethical considerations and obligations in the dental team-patient elationship.** HS-ADS-3.1

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	2 Explain the legal ramifications of dental professionals not abiding by their appropriate scope of practice HS-ADS-3.2
	3 Research significant laws that relate to the field of dentistry, including dental laboratories. HS-ADS-3.3
	4 Discuss specific Georgia state laws governing the practice of dentistry and license renewal processes for various dental careers. HS-ADS-3.4
	5 Apply ethical and legal standards used in the dental office. HS-ADS-3.5
	6 Maintain confidentiality when handling patient records adhering to the Health Insurance Portability and Accountability Act (HIPAA) guidelines. HS-ADS-3.6
	7 Demonstrate compliance with federal, state, and local regulations regarding safety practices in the dental office. HS-ADS-3.7
Respond to life threatening and non-life threatening medical and dental emergencies and perform appropriate first aid according to level of training. HS-ADS-4	1 Demonstrate effective recognition, response, performance, and management of dental office injuries and emergencies, applying appropriate first aid measures based on the level of training for both potentially life-threatening and non-life-threatening situations. HS-ADS-4.1
	2 Perform first aid skills in accordance with certification requirements through the appropriate certifying agency. HS-ADS-4.2
	3 Demonstrate the use of personal protective devices and the use of standard precautions for disease prevention during CPR. HS-ADS-4.3
	4 Open obstructed airway of an unconscious infant, child, and adult (simulation). HS-ADS-4.4
	5 Perform CPR on infant, child, and adult (simulation) in accordance to certification requirements for Healthcare Providers through the American Heart Association (AHA). HS-ADS-4.5
	6 Demonstrate rescue breathing (simulation). HS-ADS-4.6
	7 Identify when CPR may be discontinued once initiated. HS-ADS-4.7
	8 Demonstrate the effective use of an automatic external defibrillator (AED) utilizing an AED trainer. HS-ADS-4.8
	9 Demonstrate the roles and procedures followed by each member of the dental team while responding to emergency scenarios such as syncope, postural hypotension, hyperventilation, diabetes, hypoglycemia/hyperglycemia, asthma attack, epilepsy, angina pectoris, allergic reactions, stroke, acute myocardial infarction, cardiac arrest, etc. HS-ADS-4.9

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Describe and demonstrate appropriate management techniques and precautions recommended for medically and physically compromised dental patients. HS-ADS-5	1 **Explain appropriate techniques for providing dental care for patients that have developmental disabilities (mentally and physically).** HS-ADS-5.1
	2 **Discuss safety factors that need to be followed with a pregnant patient.** HS-ADS-5.2
	3 **Demonstrate proper transfer of a patient in a wheelchair to the operatory chair.** HS-ADS-5.3
	4 **Examine methods of communicating with a deaf or blind patient.** HS-ADS-5.4
	5 **Explain the purpose of providing cautionary procedures that can reduce stress and increase safety for all patients.** HS-ADS-5.5
Perform chair side assisting skills within scope of practice. HS-ADS-6	1 **Compare and contrast ways that dentistry has evolved and become more modern.** HS-ADS-6.1
	2 **Demonstrate seating the dental patient in preparation for treatment or examination.** HS-ADS-6.2
	3 **Demonstrate providing a patient with oral and/or written pre- and post- treatment instructions.** HS-ADS-6.3
	4 **Demonstrate dismissing the dental patient after treatment or examination.** HS-ADS-6.4
	5 **Explain the purpose of providing various preventative dental techniques (patient education, fluoride, sealants, irrigation, etc.).** HS-ADS-6.5
	6 **Describe the basic physical properties of dental materials.** HS-ADS-6.6
	7 **Identify the principles of cavity preparation and classification.** HS-ADS-6.7
	8 **Demonstrate preparing various tray-sets for: initial exam, prophy, scaling/root planning, restorative, composite, anesthetic, radiographs, whitening, impressions, crowns, and other dental specialties.** HS-ADS-6.8
	9 **Discuss the methods of instrument transfer (including grasps, positions, and transfer of instruments).** HS-ADS-6.9
	10 **Demonstrate transferring of instruments utilizing four-handed dentistry.** HS-ADS-6.10
	11 **Explain the hazards and safety precautions involved when transferring instruments.** HS-ADS-6.11
	12 **Demonstrate oral evacuation techniques with a high-volume evacuation (HVE) and a saliva ejector.** HS-ADS-6.12
	Demonstrate the maintenance and delivery of dental hand pieces. HS-ADS-6.13

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14 **Demonstrate steps for taking dental impressions.** HS-ADS-6.14

15 **Explore the proper procedures of taking digital photos and simulated x rays in a dental environment.** HS-ADS-6.15

Demonstrate standardized practices for identifying, documenting, and explaining essential components of a patient dental record. HS-ADS-7

1 **Identify and explain the components of the patient record: patient registration, medical history, dental history form, HIPAA disclosure form, clinical examination form, and clinical notes.** HS-ADS-7.1

2 **Differentiate between a new patient and previous patient appointment.** HS-ADS-7.2

3 **Obtain and record the patient's medical history.** HS-ADS-7.3

- a Identify any existing medical conditions and/or medications (stroke, diabetes, dizziness, depression, anxiety, joint replacements, implants, pacemaker, blood thinners, antidepressants, etc.) that may affect the health of the dental patient or effectiveness of thinners, antihistamines, chemotherapy, etc.) that may affect the health of the dental patient or effectiveness of dental treatment performed. HS-ADS-7.3.A
- b Identify various medical conditions that would require patients to receive premedication prior to dental procedures. HS-ADS-7.3.B

4 **Identify anatomical locations used to measure temperature, pulse, respiration, and blood pressure.** HS-ADS-7.4

5 **Demonstrate the ability to accurately take a patient's vital signs using aseptic techniques.** HS-ADS-7.5

6 **Demonstrate recording and reporting vital signs manually and electronically.** HS-ADS-7.6

7 **Analyze and identify normal vital signs.** HS-ADS-7.7

- a Explain factors that may affect temperature, pulse, respiration, and blood pressure. HS-ADS-7.7.A
- b Recognize and report any health factors that may affect any dental procedures being performed. HS-ADS-7.7.B

8 **Obtain and record the patient's dental history.** HS-ADS-7.8

9 **Demonstrate recording clinical information: dentist diagnostic exam, periodontal exam, dental procedures, treatment plans, and progress.** HS-ADS-7.9

10 **Demonstrate the ability to use correct terminology to provide patient education and post-op care instructions.** HS-ADS-7.10

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Demonstrate appropriate procedures for oral cancer screenings (extraoral and intraoral exams). HS-ADS-7.11

12 **Simulate the process of acquiring digital radiographs – full mouth series (FMX), horizontal bitewings (HBW), vertical bitewings (VBW), and periapicals (PAs).** HS-ADS-7.12

Maintain equipment and instruments used in dental procedures. HS-ADS-8

1 **Identify various types and functions of basic dental operatory and laboratory equipment.** HS-ADS-8.1

2 **Identify and explain the function of the following categories of dental tools:** HS-ADS-8.2

- a hand instruments (mirror, explorer, probe, scalers, etc.) HS-ADS-8.2.A
- b dental handpieces (high speed, low speed, straight and prophylaxis). HS-ADS-8.2.B
- c rotary instruments (burs) HS-ADS-8.2.C

3 **Demonstrate proper handling and care of dental operatory equipment, instruments, and hand pieces.** HS-ADS-8.3

4 **Identify physical equipment and mechanical devices provided to safeguard employees and promote proper ergonomics.** HS-ADS-8.4

Utilize management skills necessary to maintain the front office and inventory of a dental practice. HS-ADS-9

1 **Define and use terminology related to dental practice management.** HS-ADS-9.1

2 **Describe the design of a dental office and purpose of each area.** HS-ADS-9.2

3 **Identify and explain the dental office staff requirements and responsibilities.** HS-ADS-9.3

4 **Identify and explain computerized and manual systems for patient management.** HS-ADS-9.4

5 **Demonstrate maintaining an appointment book (scheduling and confirming appointments), patient records, and recall system.** HS-ADS-9.5

6 **Inform patients of pre-medication requirements for various procedures.** HS-ADS-9.6

7 **Describe the American Dental Association Nomenclature codes used for insurance billing purposes.** HS-ADS-9.7

8 **Discuss and explain patient dental coverage plans and the importance of identifying eligibility.** HS-ADS-9.8

9 **Demonstrate using CD-R codes to identify performed dental procedures.** HS-ADS-9.9

10 **Demonstrate completing dental insurance forms.** HS-ADS-9.10

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	11 **Demonstrate maintaining supplies for the dental office through inventory control management.** HS-ADS-9.11
Explore how related student organizations are integral parts of career and technology education courses through leadership development, school, and community service projects, entrepreneurship development, and competitive events. HS-ADS-10	1 **Research the history of the state supported healthcare science CTSO (Career Technical Student Organization – HOSA and/or SkillsUSA).** HS-ADS-10.1
	2 **Discuss the mission, purpose, motto, colors, official dress, and other distinguishing characteristics of the state supported healthcare science CTSO.** HS-ADS-10.2
	3 **Explain how participation in the state supported healthcare science CTSO can promote lifelong responsibility for community service and professional growth and development.** HS-ADS-10.3
	4 **Create a personal leadership plan to participate in programs, conferences, community service and competitive events on the local, state, and national level that align with the competencies, skills, and knowledge of this course.** HS-ADS-10.4