

Dental Careers II

8329 36 weeks / 280 hours

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Course Description

Suggested Grade Level: 12

Prerequisites: 8328

Units of study include medical emergencies, coronal polishing, oral pathology, dental roentgenology, nutrition, schedule IV drugs and pharmacology, and advanced laboratory techniques. In addition to attending classes for part of the week, students have the opportunity to participate in internships at local private dental offices and public health dental facilities, where they participate in all phases of dental care delivery. During the program, students are eligible to take the Dental Assisting National Board Inc. (DANB) Radiation Health and Safety; Anatomy, Morphology, and Physiology; and Infection Control (ICE) exams. Students who pass are qualified to work in entry-level dental assistant I and dental receptionist positions. After two years in the field full-time, graduates of the program are eligible to take the national examination to become a Certified Dental Assistant. Many graduates choose to continue their dental education at community colleges and universities.

NOTE: *This course has specific state laws and regulations from a governing medical board or agency. Please contact the Virginia Department of Education, Office of Career and Technical Education Services prior to implementing this course. All inquiries may be sent to cte@doe.virginia.gov.*

[Virginia Board of Dentistry Delegation to Dental Assistants Duties Guidance Document](#)

As noted in [Superintendent's Memo #058-17 \(2-28-2017\)](#), this Career and Technical Education (CTE) course must maintain a maximum pupil-to-teacher ratio of 20 students to one teacher, due to safety regulations. The 2016-2018 biennial budget waiver of the teacher-to-pupil ratio staffing requirement does not apply.

Task Essentials Table

- Tasks/competencies designated by plus icons (+) in the left-hand column(s) are essential
- Tasks/competencies designated by empty-circle icons (○) are optional
- Tasks/competencies designated by minus icons (−) are omitted
- Tasks marked with an asterisk (*) are sensitive.

8329	Tasks/Competencies
	Performing Administrative Functions
(+)	Schedule appointments.
(+)	Manage patient conversations.
(+)	Recall patients.
(+)	Demonstrate accounts receivable procedures.
(+)	Perform accounts payable transactions.
(+)	Fill out insurance forms in accordance with the Health Insurance Portability and Accountability Act (HIPAA).
(+)	Manage inventory.
(+)	Demonstrate the use of common dental office computer applications.

Handling Medical Emergencies	
+	Explain the basic medical emergency procedures and rules for a dental office.
+	List items found in basic emergency kits.
+	Describe the causes, symptoms, and treatments of selected medical situations/emergencies.
+	Obtain certification in American Heart Association Basic Life Support for Healthcare Providers and American Heart Association Heartsaver First Aid.
+	Demonstrate American Heart CPR and/or automated external defibrillator (AED) procedures.
Assisting with Advanced Pharmacology and Pain Control	
+	Describe the components of a prescription.
+	Describe the signs and symptoms of drug abuse.
+	Explain the major routes of drug administration.
+	Describe various drugs used in dentistry.
Performing Radiographic Procedures	
+	Describe the basic concepts of radiography.
+	Describe radiographic equipment.
+	Describe digital radiography.
+	Obtain radiation and health safety certification.
+	Outline governmental health and safety standards for use of radiographic equipment.
+	Demonstrate techniques for executing radiographic exposures in accordance with safety standards.
+	Identify quality-control tests to ensure the production of high-quality radiographs.
+	Demonstrate various methods of processing radiographs.
+	Demonstrate mounting radiographs.
+	Explain which radiographic techniques to use for patients with special needs.
+	Maintain radiographic processing equipment.
Demonstrating Chairside Procedures	
+	Assist with an amalgam procedure.
+	Assist with a composite procedure.
+	Simulate assisting with basic oral surgery procedures.
+	Simulate assisting with an endodontic procedure.
+	Simulate assisting with a periodontal procedure.
+	Simulate assisting with an orthodontic procedure.
+	Simulate assisting with a fixed prosthodontics procedure.
+	Simulate assisting with a removable prosthodontics procedure.
+	Apply pit and fissure sealants
+	Obtain alginate impressions for diagnostic casts.
Performing Laboratory Procedures	
+	Pour and trim diagnostic casts.
+	Prepare a dental laboratory prescription.
+	Mount models on a simple hinge articulator.
+	Fabricate a custom tray.
+	Fabricate a temporary crown or bridge.
+	Fabricate miscellaneous appliances.

Gaining and Maintaining Employment	
+	Explain the process for gaining certification.
+	Explain the importance of continuing education.
Describing the Opioid Crisis	
+	Describe the history and current state of the opioid crisis in the United States.
+	Describe the history and current state of the opioid crisis in Virginia.
+	Define the pharmacological components and common uses of opioids.
Examining the Key Factors of Drug Addiction	
+	Examine the science of addiction.
+	Explain prevention and early intervention strategies.
+	Identify addiction and its behavioral elements, as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).
+	Describe the treatment models of addiction therapy.
+	Describe the medication management antidote used to prevent fatal opioid overdoses.
Understanding Pain Management Protocols	
+	Explain the science of physiological and mental pain.
+	Describe the diagnostic tools used in developing pain management plans.
+	Describe pain treatment options available to various populations of patients.
+	Describe the effects of opioid dependency on the human body systems.
+	Explain the mechanism and physical effects of opioids on the human body.
+	Explain the use of opioids in practice settings, the role of opioids in pain management, and risk factors associated with the use of the medication.
+	Describe the withdrawal and tapering side effects of opioid use.
+	Describe storage and disposal options for opioids.
+	Explain community resources for education about opioid use.
Working with Patients and Caregivers	
+	Describe key communication topics involving opioids for patients.
+	Describe communication topics for caregivers and family members.

Legend: + Essential ○ Non-essential - Omitted

Curriculum Framework

Performing Administrative Functions

Task Number 39

Schedule appointments.

Definition

Scheduling appointments should include

- use of an appointment book, computer, and appointment cards
- handling of appointments under unusual circumstances
- concept of staggered appointments.

Process/Skill Questions

- What time lengths are used for scheduling units of time in a dental practice?
- What is the purpose of "buffer periods"?
- If a patient does not keep an appointment, where should this be recorded? Why?
- What four elements should be outlined in an appointment book?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
-

Task Number 40

Manage patient conversations.

Definition

Management should include

- investigating resources for patients with socioeconomic issues
- answering insurance-related inquiries
- refraining from giving medical advice.

Process/Skill Questions

- What dental resources are in your area?
- Where are emergency dental clinics located?
- Who is responsible for giving medical advice to patients? Why?
- With what insurance providers does the dental office participate?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
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Task Number 41

Recall patients.

Definition

Recall of patients should include use of the following systems:

- Continuing appointment system
- Instant recall
- Recall by phone
- Multiple-copy systems

Process/Skill Questions

- What is the most common time period for a recall appointment?
- What are examples of the types of recall systems?
- If a patient was last seen in March, when should his or her recall time be?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Event

- Dental Science
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Task Number 42

Demonstrate accounts receivable procedures.

Definition

Demonstration should include

- the pegboard system
- payment plans
- financial arrangements
- collections (e.g., cash, electronic transactions).

Process/Skill Questions

- If a dental office does not have a computerized accounts receivable system, what type of system could be used?
- How often should bank deposits be made?
- What are the types of financial arrangements that could be available to patients?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
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Task Number 43

Perform accounts payable transactions.

Definition

Performance should include

- writing checks
- managing petty cash on hand
- reconciling bank statements
- completing payroll record forms.

Process/Skill Questions

- Is money that is owed to the practice considered part of accounts payable? Why, or why not?
- What is the procedure at the dental office for check endorsement?
- What steps need to be taken if an account does not balance?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science

Task Number 44

Fill out insurance forms in accordance with the Health Insurance Portability and Accountability Act (HIPAA).

Definition

Filling out insurance forms should include

- information about the beneficiary and subscriber
- use of standard American Dental Association (ADA) procedure codes for treatment rendered by the provider
- signatures of the subscriber and provider
- the carrier's dental coverage plan, including the following:
 - UCR fees
 - Schedule of benefits
 - Deductibles
 - Exclusions
 - Limitations
 - Maximums
 - Predetermination of benefits
- provider fee schedule
- submission of completed paper claim forms
- use of the superbill
- electronic submission of claims.

Process/Skill Questions

- Is it permitted for a patient to be covered under two insurance policies? Why, or why not?
- How is an insurance claim submitted?
- What is the goal of HIPAA?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
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Task Number 45

Manage inventory.

Definition

Management should include

- taking inventory
- following procedures for materials and supplies with expiration dates
- rotating stock
- ordering supplies
- filling out appropriate forms.

Process/Skill Questions

- What is the purpose of taking inventory?
- How are reorder tags used?
- What two factors should be determined when a product is to be reordered?

HOSA Competitive Events (High School)

Health Professions Events

- Dental Science
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Task Number 46

Demonstrate the use of common dental office computer applications.

Definition

Demonstration should include the basic operation of specific dental-office software, including user entry and editing systems, appointment scheduling, payment entries, transferring patient records, and charting.

Process/Skill Questions

- How is an appointment scheduled for a specific operator?
- How is information for the day backed up?
- How is a schedule printed out?
- Why is it important to use user identification systems?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science

Handling Medical Emergencies

Task Number 47

Explain the basic medical emergency procedures and rules for a dental office.

Definition

Explanation should include

- update of patient health history forms
- emergency preparedness strategies
- emergency standards for dental personnel
- written procedures and training for emergencies regarding anesthesia, sedation, and analgesia as outlined in the Commonwealth of Virginia Regulations Governing Dental Practice page 23 18VAC60-20-107 revised May 7, 2014.

Process/Skill Questions

- What should you do if a patient begins to have a seizure in the dental chair?
- What should you do to prepare the office for emergency procedures?
- What steps could you take to alert other dental office staff of a patient's medical conditions without violating HIPAA?

HOSA Competitive Events (High School)

Health Professions Events

- Dental Science
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Task Number 48

List items found in basic emergency kits.

Definition

List should include

- epinephrine
- inhaler
- icing agent
- nitroglycerine spray
- ammonia ampules or inhalants
- oxygen source
- juice boxes (i.e., sugar).

Process/Skill Questions

- What could happen if the items in an emergency kit were expired?
- What steps should you take when the oxygen in a tank is low?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CPR/First Aid
-

Task Number 49

Describe the causes, symptoms, and treatments of selected medical situations/emergencies.

Definition

Description should include a list of medical emergencies and their causes, symptoms, and treatments per the American Heart Association Heartsaver First Aid course.

Process/Skill Questions

- What steps should be taken if a patient inhales or swallows a crown?
- What could happen to a patient if a crown he or she has inhaled is not removed?
- Under what conditions would you remove a patient from the dental chair to perform emergency procedures?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CPR/First Aid
-

Task Number 50

Obtain certification in American Heart Association Basic Life Support for Healthcare Providers and American Heart Association Heartsaver First Aid.

Definition

Obtaining should include getting and maintaining certification.

Process/Skill Questions

- What is the ratio of breaths to compressions for an adult?
- What is the rationale for renewing CPR certification every two years?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CPR/First Aid
-

Task Number 51

Demonstrate American Heart CPR and/or automated external defibrillator (AED) procedures.

Definition

Demonstration should include the following:

- Artificial respirations
- CPR procedure
- AED procedure
- Obstructed airway procedure for an unconscious victim
- Obstructed airway procedure for a conscious victim (Heimlich maneuver)

Process/Skill Questions

- What are the dangers of improper use of the automated external defibrillator?
- What is the difference between performing CPR on an adult and performing it on a child?

HOSA Competitive Events (High School)

Health Professions Events

- Dental Science
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Assisting with Advanced Pharmacology and Pain Control

Task Number 52

Describe the components of a prescription.

Definition

Description should include

- the heading, body, closing, and abbreviations
- security procedures designed to prevent the improper use of prescription medications and prescription pads.

Process/Skill Questions

- Why is it important for a prescription to be legible?
- What problems could arise from leaving a prescription pad in an unsecured location in a clinic?
- What are the consequences for a patient who alters his or her prescription?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology
 - Medical Terminology
-

Task Number 53

Describe the signs and symptoms of drug abuse.

Definition

Description should include the signs and symptoms of abuse of the following substances:

- Alcohol
- Cocaine
- Narcotic analgesics
- Barbiturates
- Amphetamines
- Hallucinogens

Process/Skill Questions

- What might you say to a patient, doctor, or coworker who constantly wears long sleeves despite very warm weather?
- What might you say to a patient who smells of alcohol?
- What are the oral manifestations or signs of methamphetamine abuse?

HOSA Competitive Events (High School)

Teamwork Events

- Health Education

Task Number 54

Explain the major routes of drug administration.

Definition

Explanation should include the following routes:

- Inhalation
- Topical
- Rectal
- Oral
- Sublingual
- Parenteral
- Subcutaneous
- Intramuscular
- Intravenous

Process/Skill Questions

- What is the most common drug administration route used in dentistry?
- What would you do in the case of a patient who is to receive nitrous but cannot breathe from his or her nose at the time due to allergies or a cold?

- What specialties in dentistry require the use of intravenous drug administration?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
-

Task Number 55

Describe various drugs used in dentistry.

Definition

Description should include the signs, symptoms, and schedules of

- antibiotics
- antifungals
- vasoconstrictors
- antihistamines
- atropine sulfate
- oxygen
- analgesics
- nitrous oxide
- narcotics.

Process/Skill Questions

- What dangers may exist when using vasoconstrictors on patients?
- What role does nitrous play in managing patient anxiety?
- What would you do if a patient who is supposed to premedicate presents without premedicating?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
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Performing Radiographic Procedures

Task Number 56

Describe the basic concepts of radiography.

Definition

Description should include the ways radiation is administered in order to create radiographs that will identify and help dentists diagnose conditions that may otherwise go undetected.

Process/Skill Questions

- How was radiology discovered?
- What are the three types of radiation? Which type is used in dentistry?
- What conditions can be diagnosed by using a radiograph?

HOSA Competitive Events (High School)

Health Professions Events

- Dental Science
-

Task Number 57

Describe radiographic equipment.

Definition

Description should include machine settings, selection of film, and selection of positioning devices.

Process/Skill Questions

- What are the primary components of a dental X-ray machine?
- What controls are usually found on the control panel of a dental X-ray machine?
- What is the most common film size used for an intraoral picture?
- What are the two types of extraoral films?

HOSA Competitive Events (High School)

Health Professions Events

- Dental Science
-

Task Number 58

Describe digital radiography.

Definition

Description should include the concept that digital radiography is a film-less imaging system used to record dental images by using a sensor, breaking an image into electronic pieces, and storing it on a computer.

Process/Skill Questions

- What are the advantages and disadvantages of digital radiography?
- How are sensors sterilized?
- Which exposure technique is preferred when using digital radiography?

HOSA Competitive Events (High School)

Health Professions Events

- Dental Science
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Task Number 59

Obtain radiation and health safety certification.

Definition

Obtaining certification should include meeting the requirements outlined in the Virginia Board of Dentistry Delegation to Dental Assistants guidance document 60-20.

Process/Skill Questions

- What is the benefit of obtaining a radiation and health safety certification?
- Where is the radiation and health safety certification recognized?
- How do you prepare to successfully obtain radiation and health safety certification?

HOSA Competitive Events (High School)

Health Professions Events

- Dental Science
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Task Number 60

Outline governmental health and safety standards for use of radiographic equipment.

Definition

Outline should include

- recommended total filtration for X-ray machines
- recommended diameter used with collimator
- local, state, and federal health and safety standards
- role that licensed dentists have in ensuring that radiation exposure to patients and staff is as low as reasonably achievable (ALARA)
- inherent health risks associated with radiation and basic rules of radiation safety as outlined by the Dental Assisting National Board Inc. (DANB) Radiation Health Safety exam blueprint.

Process/Skill Questions

- What filtration should be on the radiation machine?
- What is the required diameter of the collimator?
- How often should the radiation machine be inspected?

HOSA Competitive Events (High School)

Health Professions Events

- Dental Science

Teamwork Events

- Biomedical Debate

Task Number 61

Demonstrate techniques for executing radiographic exposures in accordance with safety standards.

Definition

Demonstration of techniques must be performed

- to correspond with diagnosis
- to ensure that exposed film is placed in containers to maintain asepsis
- to position radiographic film as specified by the instructor
- to ensure that equipment is turned off upon completion
- to dispose of barriers upon completion.

Process/Skill Questions

- What are the two techniques for exposing radiographs?
- Which radiographic technique has the film touching the tooth?
- Why is an exposure sequence important?
- What is the purpose of personal monitoring?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
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Task Number 62

Identify quality-control tests to ensure the production of high-quality radiographs.

Definition

Identification should include listing and explaining all quality-control tests available for use.

Process/Skill Questions

- What is the purpose of the coin test?
- What is one of the most critical areas in a quality-control plan?
- How often should processing solutions be replenished?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
-

Task Number 63

Demonstrate various methods of processing radiographs.

Definition

Demonstration should include periapical, bite wing (BW), and extraoral X-rays, with film processed successfully, either automatically or manually, and mounted and labeled according to guidelines.

Process/Skill Questions

- What are the five steps in manually processing dental radiographs?
- What is the order of solutions in an automatic processor?
- What should be labeled on film mounts?
- What is the optimum temperature of the water in automatic processing tanks?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
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Task Number 64

Demonstrate mounting radiographs.

Definition

Demonstration should include identifying the patient's name, tooth number, and date and placing each radiograph in a full mouth series in the proper position in a frame.

Process/Skill Questions

- Why is it important for the dental assistant to recognize anatomical landmarks?
- When mounting radiographs, what is the recommendation from the ADA concerning the placement of the raised dot?
- How should films be handled?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
-

Task Number 65

Explain which radiographic techniques to use for patients with special needs.

Definition

Explanation should include the reasons and ways that radiographic exam techniques might be modified to accommodate patients with special needs, including

- patients who have foreign body objects and/or piercings
- patients with vision, hearing, or mobility impairments
- patients with developmental disabilities
- edentulous, gagging, or pediatric patients.

Process/Skill Questions

- What physical disabilities may affect the making of dental radiographs?
- Under what circumstance would you hold a film for a patient?
- For partially edentulous patients, how can you modify the technique by using a bite block?
- Why is the exposure sequence especially important when taking X-rays on a patient with a severe gag reflex?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
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Task Number 66

Maintain radiographic processing equipment.

Definition

Maintenance should include draining and/or cleaning the equipment/tank and replenishing or replacing chemical solutions, as specified by the manufacturer.

Process/Skill Questions

- What needs to be done to the rollers of an automatic processor during maintenance?
- Are manual processing solutions and automatic processing solutions interchangeable? Why, or why not?
- How often should the levels of solutions in an automatic processor be checked?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science

Demonstrating Chairside Procedures

Task Number 67

Assist with an amalgam procedure.

Definition

Assistance should include

- preparing the instrument tray
- placing and removing matrices
- mixing and manipulating bases, cements, and amalgam
- placing amalgam
- polishing amalgam with a slow-speed hand piece with a prophylaxis cup
- placing and removing the rubber dam
- disposing of amalgam
- delivering pre- and post-operative instructions.

Process/Skill Questions

- What are at least three hand-cutting instruments? How would you describe them?
- What instruments are found on an amalgam tray setup?

- Why is calcium hydroxide used?
- What is the purpose of the matrix band and retainer?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
-

Task Number 68

Assist with a composite procedure.

Definition

Assistance should include

- preparing the instrument tray
- selecting a shade
- placing and removing matrices
- applying etch, primer, and bond agents
- placing and removing a rubber dam
- delivering pre- and post-operative instructions.

Process/Skill Questions

- What is the purpose of a curing light?
- What instruments are found on a composite tray?
- What is the order of use of the instruments on a composite tray?
- What is the difference between self-cured and light-cured composites?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
-

Task Number 69

Simulate assisting with basic oral surgery procedures.

Definition

Simulation should include

- preparing the instrument tray
- selecting materials and disposals
- placing and removing post-extraction dressings
- monitoring bleeding
- demonstrating the passing of instruments
- demonstrating irrigation and suction
- demonstrating and maintaining the field of operation
- removing sutures
- demonstrating the treatment of dry socket
- delivering pre- and post-operative instructions.

Process/Skill Questions

- Is a general dentist permitted to perform a surgical extraction? Why, or why not?
- What number is given to the universal forceps?
- What is the purpose of an elevator?
- What equipment is used when performing a surgical scrub?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
-

Task Number 70

Simulate assisting with an endodontic procedure.

Definition

Simulation should include

- preparing the instrument tray
- placing and removing the rubber dam
- measuring instrument lengths
- mixing and manipulating materials
- drying canals with paper points
- delivering pre- and post-operative instructions.

Process/Skill Questions

- What is the result of bacteria entering the nerves and blood vessels of a tooth?
- What is the definition of *gutta-percha*?
- Which irrigation solution is most often used during endodontic treatment?
- Why are paper points used in endodontic treatment?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science

Task Number 71

Simulate assisting with a periodontal procedure.

Definition

Simulation should include

- preparing the instrument tray
- mixing and manipulating materials
- placing and removing periodontal dressings
- delivering pre- and post-operative instructions.

Process/Skill Questions

- What is the difference between a scaling and a curettage?
- What is considered a normal pocket depth in the sulcus area?
- What is the function of a periodontal dressing?
- What areas of the tooth are measured for periodontal pockets?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
-

Task Number 72

Simulate assisting with an orthodontic procedure.

Definition

Simulation should include

- preparing the instrument tray
- placing and removing elastic separators
- checking for loose bands and brackets
- removing arch wires and ligature ties
- placing ligatures to tie in archwire
- selecting and fitting bands and brackets for cementation by the dentist
- instructing patients in the placement and removal of retainers and appliances after the dentist has fitted and made adjustments in the mouth
- delivering pre- and post-operative instructions.

Process/Skill Questions

- What are at least three orthodontic instruments? How would you describe them?
- What term is used for abnormal occlusion?
- What tooth determines a person's occlusion?
- What gypsum product is most commonly used for fabricating diagnostic models in an orthodontic practice?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
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Task Number 73

Simulate assisting with a fixed prosthodontics procedure.

Definition

Simulation should include

- preparing the instrument tray
- selecting materials and disposables
- identifying the criteria for determining the material used to construct the crown and bridge
- taking bite registration
- fabricating cementing, and removing temporary crowns
- removing excess cement from coronal surfaces of teeth
- delivering pre- and post-operative instructions.

Process/Skill Questions

- What is used to displace gingival tissue during a crown and bridge preparation?
- What does the dentist use to reduce the height and contour of a tooth for a casting?
- What types of impressions are used during a crown preparation?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science

Task Number 74

Simulate assisting with a removable prosthodontics procedure.

Definition

Simulation should include

- preparing the instrument tray
- making impressions for athletic, night, occlusal, and/or snoring mouthguards and fluoride and/or bleaching trays
- cleaning and polishing removable appliances and prosthetics
- delivering pre- and post-operative instructions.

Process/Skill Questions

- What information would a patient need to know at a denture-delivery appointment?
- Why is it necessary to have a "try-in" appointment for most removable prosthetic appliances?
- Why is alginate impression material contraindicated for use in a final impression?
- What type of material is used to check occlusion in a removable partial denture?
- Why does a full-denture patient need to remove his or her appliance at night?
- How do the procedures of a one-day denture-delivery office compare to those in the five-to-seven appointment series of a prosthodontic office?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science

Task Number 75

Apply pit and fissure sealants

Definition

Application should include

- preparing the instrument tray
- isolating the tooth
- cleaning the tooth surface with pumice
- applying etch and sealant to the tooth
- curing sealant
- checking occlusion
- delivering pre- and post-operative instructions.

Process/Skill Questions

- What is the function of etch?
- What is the purpose of dental sealants?
- Why are pits and fissures susceptible to caries?
- Why is a clear sealant material less desirable?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
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Task Number 76

Obtain alginate impressions for diagnostic casts.

Definition

Obtaining alginate impressions should include

- selecting equipment and materials
- manipulating materials
- placing and removing the impression tray
- cleaning equipment.

Process/Skill Questions

- Is an impression a negative or positive reproduction?
- Which type of tray allows an impression material to lock on mechanically?
- What is the water-to-powder ratio for taking a maxillary impression?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science

Performing Laboratory Procedures

Task Number 77

Pour and trim diagnostic casts.

Definition

Pouring and trimming diagnostic casts should include

- selection of equipment and materials
- use of safety precautions
- practice in pouring and trimming.

Process/Skill Questions

- What is a safety precaution when using the model trimmer?
- What is another term for *dental model*?
- What are the three forms of gypsum?
- What area of the maxillary model is trimmed differently?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
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Task Number 78

Prepare a dental laboratory prescription.

Definition

Preparation should include identifying and entering all of the information required to complete a prescription form in accordance to the Virginia Board of Dentistry guidance document 60-18.

Process/Skill Questions

- What information is required on a lab prescription form?
- What information is required on the form for a removable appliance?
- What information is required on the form for a fixed prosthesis?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
-

Task Number 79

Mount models on a simple hinge articulator.

Definition

Mounting should include pre-trimming the models, using bite registration, and ensuring occlusion.

Process/Skill Questions

- What are the ideal measurements for mounted casts?
- Why are mounted casts needed?
- Why is vertical dimension important?
- How do dental specialists use mounted models?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
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Task Number 80

Fabricate a custom tray.

Definition

Fabrication should include identification, selection, and placement of all materials needed for various types of trays, including self-curing acrylic, vacuum form, and light-curing unit.

Process/Skill Questions

- Why would a custom tray need to be fabricated?
- Which type of material is used for a vacuum form custom tray?
- What are the benefits of custom trays?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
-

Task Number 81

Fabricate a temporary crown or bridge.

Definition

Fabrication should include cementing and removing temporary crowns and/or restorations.

Process/Skill Questions

- What is the normal time frame for wearing a temporary crown or bridge?
- What type of dental material is used to fabricate custom provisional coverage?
- Why would an aluminum crown be selected for use?
- What are the two most common cements used for provisional crowns?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
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Task Number 82

Fabricate miscellaneous appliances.

Definition

Fabrication should include identifying specific requirements appliances such as athletic, night, occlusal, and/or snoring mouthguards and fluoride and/or bleaching trays.

Process/Skill Questions

- Why would a night guard be recommended to a patient?
- What equipment is needed to construct an athletic mouth guard?
- What is the criteria for a finished appliance?

HOSA Competitive Events (High School)

Health Science Events

- Dental Terminology

Health Professions Events

- Dental Science
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Gaining and Maintaining Employment

Task Number 83

Explain the process for gaining certification.

Definition

Explanation should include reference to all dental certifications, including those administered by the following organizations:

- Virginia Board of Dentistry
- Dental Assisting National Board Inc. (DANB)

Process/Skill Questions

- Why should a dental assistant become certified?
- How are professional credentials acquired and maintained?
- Do you need to be certified in radiology before exposing X-rays? Why, or why not?
- What education is required before taking the DANB exam?

HOSA Competitive Events (High School)

Leadership Events

- Interviewing Skills
 - Job-Seeking Skills
-

Task Number 84

Explain the importance of continuing education.

Definition

Explanation should include the necessity of maintaining national certification, the importance of complying with changing local and state laws governing the practice of dentistry, and the 2014 DANB Salary Survey Results.

Process/Skill Questions

- Why is continuing education necessary to comply with local and state laws governing the practice of dentistry?
- How many hours of continuing education are required per year to maintain the DANB certification?

HOSA Competitive Events (High School)

Leadership Events

- Interviewing Skills
 - Job-Seeking Skills
-
-

Describing the Opioid Crisis

Task Number 85

Describe the history and current state of the opioid crisis in the United States.

Definition

Description should include

- the relationship between opioid prescribing and illicit opioid use to overall opioid overdose deaths
- the prevalence of co-occurring mental health disorders
- the shift in attitudes in the 1990s toward pain management and use of opioids, including the role of pharmaceutical marketing
- the stigma associated with addiction and the changing view of addiction from a moral failing to a chronic, relapsing disease
- statistics, trends, and demographics surrounding the crisis
- population health and other public health aspects of the crisis, including its effects on family and neonates, as well as overall health costs.

Process/Skill Questions

- How are opioids created?
- Can opioids be safely prescribed to patients taking psychotropic drugs?
- How does society stereotype individuals with a history of drug addiction?
- What are the current trends that have contributed to the nationwide opioid crisis?
- How has the opioid epidemic affected emergency rooms and the first responder system?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- Creative Problem Solving
- Public Service Announcement

Task Number 86

Describe the history and current state of the opioid crisis in Virginia.

Definition

Description should include

- the relationship between opioid prescribing and illicit opioid use to overall opioid overdose deaths

- the prevalence of co-occurring mental health disorders
- the shift in attitudes in the 1990s toward pain management and use of opioids, including the role of pharmaceutical marketing
- the stigma associated with addiction and the changing view of addiction from a moral failing to a chronic, relapsing disease
- statistics, trends, and demographics surrounding the crisis
- population health and other public health aspects of the crisis, including its effects on family and neonates, as well as overall health costs
- the Virginia Department of Health’s [Declaration of a Public Health Emergency](#) on November 21, 2016
- proposed legislation to address the crisis in Virginia (i.e., [House Bill 2161](#) and [Senate Bill 1179](#), which require the secretary of health and human resources to convene a workgroup to establish educational guidelines for training healthcare providers in the safe prescribing and appropriate use of opioids)
- the development of curricula and educational standards regarding opioid addiction.

Resource: [The Opioid Crisis Among Virginia Medicaid Beneficiaries](#)

Process/Skill Questions

- What agencies participated in the governor’s task meeting on the opioid crisis?
- What educational organizations will be tasked with providing opioid training to their students?
- What is the benefit of educating future medical professionals about opioid addiction?
- What is the current attitude in society about opioid use and addiction?
- How is the local community affected by the opioid epidemic?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- Creative Problem Solving
- Public Service Announcement

Task Number 87

Define the pharmacological components and common uses of opioids.

Definition

Definition should include

- plant-based opioids (e.g., opium from poppy seeds)
- names of legal and illegal opioids
- [heroin](#)
- names of the most common opioids
- [fentanyl](#)
- medical diagnoses and injuries associated with opioid prescriptions
- [commonly used terms](#).

Resource: [Prescription Pain Medications](#), National Institute on Drug Abuse for Teens

Process/Skill Questions

- For what illnesses are opioids commonly prescribed?
- What is the current medical protocol when opioids are prescribed?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology
- Knowledge Test: Pharmacology

Health Professions Events

- Clinical Nursing

Examining the Key Factors of Drug Addiction

Task Number 88

Examine the science of addiction.

Definition

Examination should include

- biopsychosocial aspects of addiction
- the role of endorphins and dopamine
- the role of religious beliefs
- behavioral aspects of addiction
- life cycle of addiction
- misuse of opioids.

Process/Skill Questions

- How will understanding the physiological absorption of opioids in the body provide a holistic assessment?
 - What spiritual characteristics might be observed in the science of addiction?
 - What are some genetic explanations for some family members being more prone to addiction?
-

Task Number 89

Explain prevention and early intervention strategies.

Definition

Explanation should include

- risk and protective factors in opioid addiction
- specific populations at risk of addiction
- motivational interviewing and other communication strategies
- naloxone co-prescribing
- roles of family and social institutions in prevention and early intervention.

Resources:

- [Prevention Tip Card](#), Office of the Attorney General of Virginia
- [Prescription Opioids: Even When Prescribed by a Doctor](#) (video), Centers for Disease Control and Prevention (CDC)

Process/Skill Questions

- What are the physiological characteristics of opioid addiction?

- What demographic is most affected by the opioid epidemic? What are some explanations for this?
 - How can provision of naloxone and training in its use be sustained financially?
 - What obligations do families and society as a whole have in preventing and providing early intervention related to drug addiction?
-

Task Number 90

Identify addiction and its behavioral elements, as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).

Definition

Identification should include

- DSM-5 Criteria for Substance Use Disorders
- American Society of Addiction Medicine (ASAM) Criteria (i.e., The Six Dimensions of Multidimensional Assessment)
- CONTINUUM, The ASAM Criteria Decision Engine
- clinical and behavioral aspects of addiction
- practice-appropriate screening tools, including co-morbidity screening.

Process/Skill Questions

- What are DSM-5 and ASAM and what information do they provide to healthcare professionals?
- What are clinical and behavioral elements of addiction that should be recognized by healthcare professionals?
- Who is responsible for providing the necessary screening tools and training?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Behavioral Health
- Knowledge Test: Medical Law and Ethics

Health Professions Events

- Clinical Nursing

Task Number 91

Describe the treatment models of addiction therapy.

Definition

Description should include

- a recognition that addiction is a chronic disease
- evidence-based treatment models for addiction in general and opioid addiction in particular
- medication-assisted treatment
- the continuum of care in opioid addiction treatment
- how and when to make a referral for treatment
- the roles in an interdisciplinary addiction team
- the role of peers in the treatment of addiction
- the difference between a drug culture and recovery culture
- the management of patients in recovery, including factors contributing to relapse.

Process/Skill Questions

- How many treatment models exist for addiction therapy? Why is one model better than the other?
- What are the advantages of evidence-based treatments and models?
- What medication-assisted treatment programs are available? Who provides them?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Behavioral Health
- Knowledge Test: Medical Law and Ethics

Health Professions Events

- Clinical Nursing

Task Number 92

Describe the medication management antidote used to prevent fatal opioid overdoses.

Definition

Description should include

- availability and use of naloxone
- naloxone training (e.g., [REVIVE!](#))
- naloxone training agencies
- monitoring of concurrent prescriptions.

Resources:

- [Frequently Asked Questions about Naloxone](#), Virginia Department of Health
- [How to prepare naloxone for administration](#), Virginia Department of Behavioral Health and Developmental Services

Process/Skill Questions

- What is naloxone?
- How much does naloxone cost with health insurance? How much does naloxone cost without health insurance?
- Who should receive naloxone training?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology
- Knowledge Test: Pharmacology

Understanding Pain Management Protocols

Task Number 93

Explain the science of physiological and mental pain.

Definition

Explanation should include

- definition of pain from the International Association for the Study of Pain (IASP)
- neurobiological basis of pain
- biopsychosocial model of pain
- types of pain (e.g., neuropathic)
- acute, sub-acute, and chronic pain, including pain generation
- spinal and brain modulation, behavioral adaptation and maladaptation, and the continuum from acute to chronic disabling pain
- the underlying science of pain relief.

Process/Skill Questions

- What is the IASP definition of pain?
- How can a medical professional get a patient to describe physiological pain?
- What assessment tools can be used to help patients describe physiological pain? How do tools differ for describing mental pain?
- How are pain and levels of pain categorized?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Nutrition
- Knowledge Test: Transcultural Health Care

Teamwork Events

- Community Awareness
- Creative Problem Solving
- HOSA Bowl

Task Number 94

Describe the diagnostic tools used in developing pain management plans.

Definition

Description should include

- pain-related health history and examination
- understanding the role of family in supporting individuals in need of pain management
- practice-appropriate screening tools that include aspects such as mood and function
- the use and limitations of pain scales
- differential diagnosis of pain and its placement on the pain continuum.

Resource: [Promoting Safer and More Effective Pain Management](#), CDC

Process/Skill Questions

- What are the Wong-Baker, LEGO, and Hospice assessment tools?
- How do pain assessment tools vary across the life span?
- When completing an assessment, is pain considered subjective or objective?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Nutrition
- Knowledge Test: Transcultural Health Care

Teamwork Events

- Community Awareness
- Creative Problem Solving
- HOSA Bowl

Task Number 95

Describe pain treatment options available to various populations of patients.

Definition

Description should include

- special populations in pain management, such as palliative/end-of-life care patients, patients with cancer, pediatric patients, and geriatric populations
- non-pharmacologic treatment of pain, including active care and self-care, evidence- and non-evidence-based approaches, and multimodal pain management

- non-opioid pharmacologic management of pain
- the challenges in discussing the psychological aspects of pain and the role of the central nervous system
- adverse drug event prevention for all pain medications
- the roles in an interdisciplinary pain management team
- the significance of issues such as anxiety, depression, and sleep deprivation in pain management
- the placebo effect
- goals and expectations in the treatment of pain, based on diagnosis and pain continuum
- when to make a pain referral and to whom.

Resources:

- [CDC Fact Sheet for Prescribing Opioids for Chronic Pain](#)
- [CDC Guidelines for Prescribing Opioids for Chronic Pain](#)

Process/Skill Questions

- What pain management resources are available for special populations?
- What are alternative forms of pain management?
- What role does the mind play in pain management?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Nutrition
- Knowledge Test: Transcultural Health Care

Teamwork Events

- Community Awareness
- Creative Problem Solving
- HOSA Bowl

Task Number 96

Describe the effects of opioid dependency on the human body systems.

Definition

Description should include the short- and long-term effects of opioids on the following:

- Nervous system
- Respiratory system
- Circulatory system
- Digestive system
- Skeletal system

Resource: [Drugs and Your Body](#), Scholastic

Process/Skill Questions

- How does the misuse of opioids affect nutrition and weight loss?
- How might opioid misuse be evident in a person's vital signs?
- How do opioids affect the brain as the control center for homeostasis?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- HOSA Bowl
-

Task Number 97

Explain the mechanism and physical effects of opioids on the human body.

Definition

Explanation should include the following:

- Mechanism of action and metabolism of opioids
- Development of tolerance, dependence, and addiction
- Health consequences of drug misuse
 - HIV, hepatitis, and other infectious diseases
 - Cancer
 - Cardiovascular effects

- Respiratory effects
- Gastrointestinal effects
- Musculoskeletal effects
- Kidney damage
- Liver damage
- Neurological effects
- Hormonal effects
- Prenatal effects
- Other health effects
- Mental health effects
- Death
- Withdrawal
 - Causes
 - Timeframe (i.e., peaks of withdrawal symptoms)
 - Physical signs (e.g., nausea, diarrhea, vomiting, cold flashes)

Process/Skill Questions

- What are the short- and long-term effects of withdrawal dependence symptoms?
- How long can the human body function while exhibiting the symptoms of withdrawal?
- What are other medical conditions that may arise because of the symptoms of physical dependence?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- HOSA Bowl

Task Number 98

Explain the use of opioids in practice settings, the role of opioids in pain management, and risk factors associated with the use of the medication.

Definition

Explanation should include

- appropriate use of different opioids in various practice settings
- the interactions, risks, and intolerance of prescription opioids
- the role and effectiveness of opioids in acute, sub-acute, and chronic pain
- a reassessment of opioid use based on stage of pain
- contemporary treatment guidelines, best practices, health policies, and government regulations related to opioid use
- use of opioids in pain management of patients with substance abuse disorders, in recovery, and in palliative/end-of-life care.

Process/Skill Questions

- When should risk factors regarding opioids be reviewed with the patient?
- What are the options when treating patients with a history of substance abuse?
- What government regulations and policies are in place to improve the safe administration of opioids?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology
- Knowledge Test: Pharmacology

Teamwork Events

- Creative Problem Solving
- HOSA Bowl

Task Number 99

Describe the withdrawal and tapering side effects of opioid use.

Definition

Description should include

- characteristics of acute and protracted withdrawal from opioid dependence or addiction
- tapering

- pain contracts or agreements.

Process/Skill Questions

- What are the stages of withdrawal in opioid abuse transition?
- What medications might be needed in the withdrawal stage?
- What information should be included in the pain management contract?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Pharmacology

Health Professions Events

- Clinical Nursing

Task Number 100

Describe storage and disposal options for opioids.

Definition

Description should include

- medicine take-back options (e.g., [National Drug Take Back Day](#))
- disposal in the household trash and flushing certain potentially dangerous medicines down the toilet.

Resources:

- [Disposal of Unused Medicines: What You Should Know](#), Food and Drug Administration (FDA)
- [Prescription Drug Abuse and Tips for Proper Disposal](#), Office of the Attorney General of Virginia

Process/Skill Questions

- How should medications be stored in the house?
- What is National Prescription Drug Take Back Initiative?
- What is the *black box*?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Pharmacology

Health Professions Events

- Clinical Nursing
-

Task Number 101

Explain community resources for education about opioid use.

Definition

Explanation should include key components of and resources for patient education in the use of opioids, including

- risks
- benefits
- side effects
- tolerance
- signs of sedation or overdose
- naloxone, including its storage and disposal.

Process/Skill Questions

- What resources for opioid education are available locally, statewide, and nationally?
- Where should the patient first be informed about the resources available?
- How does social media aid in patient education on opioid addiction?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Pharmacology

Health Professions Events

- Clinical Nursing

Working with Patients and Caregivers

Task Number 102

Describe key communication topics involving opioids for patients.

Definition

Description should include

- benefits and risks of opioids
- opioid risk screening (i.e., taking a social, medical, and financial history)
- risk mitigation (e.g., naloxone, safe storage, pain contracts)
- medication tapers and/or discontinuation of therapy.

Process/Skill Questions

- What are the benefits of using opioids in medicine?
- What is the relationship between demographics and risk of opioid addiction?
- How does culture influence risk factors in opioid abuse?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Health Professions Events

- Clinical Nursing
-

Task Number 103

Describe communication topics for caregivers and family members.

Definition

Description should include

- basic knowledge about opioids
- signs of addiction
- treatment options for addiction
- naloxone training for caregivers
- legal issues related to misuse.

Process/Skill Questions

- What rights do caregivers have in regard to medical information of the abuser?
- What legal steps might the caregiver or family have to take for treatment?
- Where can the caregiver or family members receive naloxone training? Are children of opioid abusers eligible for training?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Health Professions Events

- Clinical Nursing

SOL Correlation by Task

39	Schedule appointments.	
40	Manage patient conversations.	
41	Recall patients.	
42	Demonstrate accounts receivable procedures.	
43	Perform accounts payable transactions.	
44	Fill out insurance forms in accordance with the Health Insurance Portability and Accountability Act (HIPAA).	
45	Manage inventory.	

46	Demonstrate the use of common dental office computer applications.	
47	Explain the basic medical emergency procedures and rules for a dental office.	English: 12.5
48	List items found in basic emergency kits.	
49	Describe the causes, symptoms, and treatments of selected medical situations/emergencies.	English: 12.5, 12.6, 12.7
50	Obtain certification in American Heart Association Basic Life Support for Healthcare Providers and American Heart Association Heartsaver First Aid.	
51	Demonstrate American Heart CPR and/or automated external defibrillator (AED) procedures.	
52	Describe the components of a prescription.	English: 12.5, 12.6, 12.7
53	Describe the signs and symptoms of drug abuse.	English: 12.5
54	Explain the major routes of drug administration.	English: 12.5
55	Describe various drugs used in dentistry.	English: 12.5
56	Describe the basic concepts of radiography.	English: 12.5 Science: PH.9
57	Describe radiographic equipment.	English: 12.5
58	Describe digital radiography.	English: 12.5
59	Obtain radiation and health safety certification.	
60	Outline governmental health and safety standards for use of radiographic equipment.	History and Social Science: GOVT.9
61	Demonstrate techniques for executing radiographic exposures in accordance with safety standards.	
62	Identify quality-control tests to ensure the production of high-quality radiographs.	
63	Demonstrate various methods of processing radiographs.	
64	Demonstrate mounting radiographs.	
65	Explain which radiographic techniques to use for patients with special needs.	English: 12.5
66	Maintain radiographic processing equipment.	
67	Assist with an amalgam procedure.	
68	Assist with a composite procedure.	
69	Simulate assisting with basic oral surgery procedures.	
70	Simulate assisting with an endodontic procedure.	
71	Simulate assisting with a periodontal procedure.	
72	Simulate assisting with an orthodontic procedure.	
73	Simulate assisting with a fixed prosthodontics procedure.	
74	Simulate assisting with a removable prosthodontics procedure.	
75	Apply pit and fissure sealants	
76	Obtain alginate impressions for diagnostic casts.	
77	Pour and trim diagnostic casts.	

78	Prepare a dental laboratory prescription.	
79	Mount models on a simple hinge articulator.	
80	Fabricate a custom tray.	
81	Fabricate a temporary crown or bridge.	
82	Fabricate miscellaneous appliances.	
83	Explain the process for gaining certification.	English: 12.5, 12.8 History and Social Science: GOVT.8, GOVT.9
84	Explain the importance of continuing education.	English: 12.5
85	Describe the history and current state of the opioid crisis in the United States.	English: 12.5
86	Describe the history and current state of the opioid crisis in Virginia.	English: 12.5, 12.8
87	Define the pharmacological components and common uses of opioids.	English: 12.3, 12.8
88	Examine the science of addiction.	English: 12.5
89	Explain prevention and early intervention strategies.	English: 12.5, 12.8
90	Identify addiction and its behavioral elements, as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).	English: 12.5
91	Describe the treatment models of addiction therapy.	English: 12.5
92	Describe the medication management antidote used to prevent fatal opioid overdoses.	English: 12.5, 12.8
93	Explain the science of physiological and mental pain.	English: 12.3, 12.5
94	Describe the diagnostic tools used in developing pain management plans.	English: 12.5
95	Describe pain treatment options available to various populations of patients.	English: 12.8
96	Describe the effects of opioid dependency on the human body systems.	English: 12.5
97	Explain the mechanism and physical effects of opioids on the human body.	English: 12.5
98	Explain the use of opioids in practice settings, the role of opioids in pain management, and risk factors associated with the use of the medication.	English: 12.5
99	Describe the withdrawal and tapering side effects of opioid use.	English: 12.5
100	Describe storage and disposal options for opioids.	English: 12.5, 12.8
101	Explain community resources for education about opioid use.	English: 12.5
102	Describe key communication topics involving opioids for patients.	English: 12.5
103	Describe communication topics for caregivers and family members.	English: 12.5

Teacher Resources

The following resources may be helpful to teachers and/or students.

Print Resources

- Asperheim, Mary Kaye. *Pharmacology: An Introductory Text*. 9th ed. Philadelphia: W. B. Saunders Company, 2002.
- Bailey, Larry J. *Working: Skills for a New Age*. Delmar, 1990.
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- Ehrlich, Ann. *Business Administration for the Dental Assistant*. 4th ed. Champaign, IL: Colwell Systems, 1991.
- Farr, J. Michael, Richard Gaither, and R. Michael Pickrell. *The Work Book: Getting the Job You Want*. 5th ed. Glencoe/McGraw-Hill, 1995.
- Faux, Marian. *The Complete Résumé Guide*. 5th ed. Arco Publishing, 1995.
- Finkbeiner, Betty Ladley, and Claudia Sullens Johnson. *Mosby's Comprehensive Review of Dental Assisting*. St. Louis: Mosby, 1997.
- Gage, Tommy W. and Frieda Atherton Pickett. *Mosby's Dental Drug Reference*. 7th ed. St. Louis: Elsevier Mosby, 2004.
- Govoni, Mary. *Introduction to Basic Concepts in Dental Radiography*. American Dental Assistants Association, 1999.
- Haring, Joen Iannucci, and Laura Jansen Lind. *Dental Radiography: Principles and Techniques*. 2nd ed. W. B. Saunders Co., 1996.
- Hirsch, Arlene S. *Interviewing: Effective Techniques to Help You Answer Tough Questions and Make a Great Impression*. 3rd ed. John Wiley & Sons, 1999.
- *HOSA: Learn, Grow, Become*, 2nd ed. HOSA, 1995. (Available from National HOSA and from CIMC, Oklahoma Department of Vocational and Technical Education.)
- Kelly-Plate, Joan M., and Ruth Volz-Patton. *Career Skills*. 2nd ed. Glencoe/McGraw-Hill, 2004.
- Kimbrell, Grady and Ben S. Vineyard. *Succeeding in the World of Work*. 8th ed. Glencoe/McGraw-Hill, 2004.
- Kushner, John A. *How to Find and Apply for a Job*. South-Western, 2000.
- Miles, Dale A., Margot L. Van Dis, Catherine W. Jensen, and Ann Bruno Ferretti. *Radiographic Imaging for Dental Auxiliaries*. 3rd ed. Philadelphia: W. B. Saunders Company, 1999.
- Phinney, Donna J., and Judy H. Halstead. *Delmar's Dental Assisting: A Comprehensive Approach*. 2nd ed. Delmar, 2004.
- Robinson, Debbie S., and Doni L. Bird. *Torres and Ehrlich Essentials of Dental Assisting*. 3rd ed. Philadelphia: W. B. Saunders Co., 2000.

- Tiersten, Sylvia, and Pam Dixon. *Be Your Own Headhunter Online: Get the Job You Want Using the Information Superhighway*. Random House, 1995.
- Wynett, Stanley. *Cover Letters That Will Get You the Job You Want*. Betterway Books, 1993.

Software

Many dental-related software packages are available from a variety of suppliers. Examples:

- *Dentech*. Health-Tech Systems, Inc. 1-800-288-7691.
- *Easy Dental*. Henry Schein, Inc., 5 Harbor Park Drive, Port Washington, NY 11050. 1-800-443-2756.
- *Right Resume Writer III*. The School Company, Division of Career Development Software, Inc. P. O. Box 5379, Vancouver, WA 98668. 1-206-696-3529.
- *SOFTDENT Dental Office Management Software*. Info Soft, Inc., 7939 Honeygo Boulevard, Suite 212, Baltimore, MD 21236. 1-800-433-2409.

Videos

Order from the American Dental Association, 211 East Chicago Avenue, Chicago, IL 60611-2673; Phone 312-440-2500; Fax 312-440-7494:

- *Careers in Dental Assisting, Dental Laboratory Technology, and Dental Hygiene*.
- *Dental Assisting: A Career for You*.
- *Dental Assisting: A Contemporary Career* (nontraditional students).

Order from NIMCO, P.O. Box 9, 102 Hwy 81N, Calhoun, KY 42327-0009; Phone 800-962-6662:

- *Basic Oral Anatomy for the Dental Health Team*, 1992 (MED-DA310R-V25: 12-minute live video, \$100.00. MED-DA310W-B25: Workbook, \$5.99).
- *Radiographic Techniques and Safety: Introduction to X-Ray and Safety Precautions*, 1992 (MED-DR102-V25: 17-minute live video, \$100.00. MED-DR102W-B25: Workbook, \$5.99).
- *Radiographic Techniques and Safety: Taking Radiographs*, 1992 (MED-DR103-V25: 24-minute live video, \$100.00. MED-DR103W-B25: Workbook, \$5.99).
- *Radiographic Techniques and Safety: X-Ray Film Processing*, 1992 (MED-DR104-V25: 23-minute live video, \$100.00. MED-DR104W-B25: Workbook, \$5.99).
- To obtain the series of four videos and workbooks: order MED-DR-V25, \$300.00

Order from the Academy of General Dentistry: 211 East Chicago Ave., Ste 900, Chicago, IL 60611-1999, Phone 888-AGD-DENT (888-243-3368); Fax 312-440-0559:

- *Medical Emergencies in the Dental Office*.

Entrepreneurship Infusion Units

Entrepreneurship Infusion Units may be used to help students achieve additional, focused competencies and enhance the validated tasks/competencies related to identifying and starting a new business venture. Because the unit is a complement to certain designated courses and is not mandatory, all tasks/competencies are marked “optional.”

Opioid Abuse Prevention Education

This [Opioid Abuse Prevention](#) document includes resources for opioid abuse prevention education from kindergarten to 12th grade.

Other Opioid Resources

Virginia Department of Behavioral Health and Developmental Services. Revive! Opioid Overdose and Naloxone Education for Virginia. [Naloxone Fact Sheet](#) (PDF).

Virginia Department of Behavioral Health and Developmental Services. [Revive! Opioid Overdose and Naloxone Education for Virginia](#) (website).

Office of National Drug Control Policy, White House. [Fentanyl: Safety Recommendations for First Responders](#) (PDF).

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Alcohol](#) (website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Bath Salts](#) (website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Cocaine](#) (website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: E-Cigarette](#) (website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Heroin](#) (website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Marijuana](#) (website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: MDMA](#) (website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Meth](#) (website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Pain Medicine](#) (website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Spice \(K2\)](#) (website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Tobacco and Nicotine](#) (website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. [Easy to Read Drug Facts: Other Drugs People Use and Misuse](#) (website; PDF available)

Appendix: Credentials, Course Sequences, and Career Cluster Information

Industry Credentials: Only apply to 36-week courses

- Certified Dental Assistant and National Entry Level Dental Assistant: Infection Control (ICE) Examination
- Certified Dental Assistant and National Entry Level Dental Assistant: Radiation Health and Safety (RHS) Examination
- College and Work Readiness Assessment (CWRA+)
- Dental Assisting Assessment
- National Career Readiness Certificate Assessment
- National Entry Level Dental Assistant: Anatomy, Morphology and Physiology (AMP) Examination
- Nationally Registered Certified Dental Assistant (NRCDA) Examination
- Workplace Readiness Skills for the Commonwealth Examination

Concentration sequences: *A combination of this course and those below, equivalent to two 36-week courses, is a concentration sequence. Students wishing to complete a specialization may take additional courses based on their career pathways. A program completer is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program.*

- Dental Careers I (8328/36 weeks, 280 hours)

Career Cluster: Health Science	
Pathway	Occupations
Diagnostics Services	Radiologic Technologist, Radiographer
Support Services	Records Processing Assistant
Therapeutic Services	Dental Assistant Dentist Medical Assistant Surgical Technologist Veterinary Assistant