

# STRANDS AND STANDARDS

## DENTAL ASSISTANT



### Course Description

An instructional program that prepares individuals to assist a dentist or dental hygienist performing the functions of a dental practice. Includes instruction in chairside assisting, patient preparation, front office functions, selected dental office laboratory procedures, and an introduction to radiology.

<b>Intended Grade Level</b>	12
Units of Credit	2.0
Core Code	36.01.00.00.020
Concurrent Enrollment Core Code	N/A
Prerequisite	N/A
Skill Certification Test Number	720,721,722,723
Test Weight	1.0
<b>License Type</b>	CTE and/or Secondary Education 6-12
<b>Required Endorsement(s)</b>	
Endorsement 1	Dental Assistant
Endorsement 2	N/A
Endorsement 3	N/A

## DENTAL SCIENCE I STRANDS and STANDARDS

### STRAND 1

Students will examine the field of dentistry.

#### Standard 1

Describe the following dental health team members (including educational requirements, professional organizations, responsibilities, and licensure):

- Dentist
- Dental Hygienist
- Dental Assistant
- Administrative Assistant
- Dental Laboratory Technician

#### Standard 2

Describe the following areas of specialization in dentistry:

- Dental Public Health
- Endodontics
- Oral & Maxillofacial Radiology
- Oral & Maxillofacial Surgery
- Oral Pathology
- Orthodontics
- Pediatric Dentistry
- Periodontics
- Prosthodontics

### STRAND 2

Students will identify areas of the dental office and basic dental equipment.

#### Standard 1

Identify and describe the following areas of the dental office:

- Dental Operator (treatment area)
- Reception area
- Administration/Business area
- Sterilization area
- Dental laboratory
- Dentist's private office
- Consultation room
- Dental staff lounge

#### Standard 2

Identify and describe proper use and maintenance of the following equipment:

- Operator stool

- Assistant stool
- Dental chair
- Operating light
- Air water syringe
- Oral evacuation system
- Curing light
- Tritruator
- Amalgamator
- Rheostat (foot control)
- X-ray systems
- Autoclave
- Ultrasonic cleaner

### Standard 3

Outline basic morning and evening routines.

## STRAND 3

**Students will demonstrate an understanding of appropriate ethical and legal behavior in a dental setting.**

### Standard 1

Define the difference between ethics and laws including the importance of professional and personal ethics in the workplace.

### Standard 2

Discuss ethical and legal responsibilities for the dental healthcare worker.

### Standard 3

Identify standards of the Health Insurance Portability and Accountability Act/HIPAA and discuss the need to protect the patient's privacy.

### Standard 4

Explain the purpose of the State Dental Practice Act and how it applies to the role of the dental assistant. List and understand the levels of supervision.

- Direct Supervision
- Indirect Supervision
- General Supervision

## STRAND 4

**Students will demonstrate personal safety procedures based on OSHA and CDC guidelines.**

### Standard 1

Explain the OSHA Bloodborne Pathogen Standard including:

- Training requirements
- Employee medical records
- Exposure protocol

## Standard 2

Outline the OSHA Hazard Communication Standard including:

- Training program
- Chemical inventory
- Locate OSHA posters and SDS sheets on site

## Standard 3

Compare and contrast the roles of government agencies.

- OSHA
- CDC
- NIOSH
- EPA
- FDA

## Strand 4 Performance Skills Included Below

# STRAND 5

**Students will demonstrate infection control protocol.**

## Standard 1

Identify the components of the chain of infection.

- Virulence/infectious agent
- Number of microorganisms
- Susceptible host
- Portal of entry

## Standard 2

Identify modes of infection transmission in the dental office.

- Direct transmission
- Indirect transmission
- Airborne transmission
- Parenteral transmission
- Bloodborne transmission

## Standard 3

Outline standards for prevention of disease transmission.

- Prevent cross contamination
  - Patient to dental team
  - Dental team to patient

- Patient to patient
- Dental office to community
- Community to dental office
- Maintain aseptic conditions

#### **Standard 4**

Compare the different types of dental waste and appropriate waste disposal.

- General waste
- Hazardous waste
- Contaminated waste
- Infectious waste
  - Blood/blood-soaked materials
  - Pathological waste
  - Sharps, needles, burs

#### **Strand 5 Performance Skills Included Below**

### **STRAND 6**

**Oral Anatomy. Students will identify intra-oral anatomy and surrounding structures.**

#### **Standard 1**

Identify teeth by name, location, and permanent, primary, or mixed dentition.

#### **Standard 2**

Identify anatomical parts, tissues, and surfaces of a tooth.

#### **Standard 3**

Identify supporting structures.

- Periodontal ligaments
- Alveolar bones
- Gingiva
- Cementum

#### **Standard 4**

Identify primary and permanent teeth using the Universal Tooth Numbering System.

#### **Standard 5**

Identify major landmarks of the oral cavity and surrounding structures.

- Maxillary sinus
- Salivary glands and ducts
- Maxilla
- Mandible
- TMJ

- Incisive papilla
- Rugae
- Uvula
- Frenulum
- Soft palate
- Hard palate
- Tongue
- Teeth
- Oral mucosa
- Temporal bone
- Trigeminal nerve

### Standard 6

Describe genetic and developmental factors that can affect dental development.

- Tori
- Supernumerary
- Enamel dysplasia
- Cleft palate
- Cleft lip
- Tongue-tied
- Anodontia
- Microdontia
- Macrodontia

## STRAND 7

Students will identify the infectious process of dental caries and other diseases of the oral cavity.

### Standard 1

Outline the dental caries process:

- Acids in plaque and saliva attack the tooth
- Calcium and phosphate are dissolved from the enamel (demineralization)
- Fluoride, calcium and phosphate are re-deposited into the tooth (remineralization)

### Standard 2

Describe the clinical characteristics of periodontal disease:

- Gingivitis
  - Red tissues
  - Swollen tissues
  - Tissues bleed easily
- Periodontitis
  - Inflammation of periodontium
  - Mobility

- Pain
- Pus

### Standard 3

Understand the diseases/conditions of the oral cavity and tongue including:

- Oral cancer
- Candidiasis (thrush)
- Cellulitis
- Fissured tongue
- Geographic tongue
- Glossitis
- Herpes
- “Meth Mouth”
- Eating Disorders

## STRAND 8

**Students will identify components of a comprehensive preventive dentistry program including patient education.**

### Standard 1

Explain the parts of a preventive dentistry program and their effects on oral conditions.

- Nutrition
  - Dental decay is directly linked to the presence of dietary sugars (sucrose) in the diet.
- Plaque control
  - Disclosing
  - Tooth brushing methods-Bass
  - Flossing
- Fluoride therapy
- Dental check-ups

### Standard 2

Identify different products used for oral hygiene and their uses.

- Toothbrushes
- Dental floss/tape
- Interdental aids
- Toothpastes
- Mouth rinses

### Strand 8 Performance Skills Included Below

## STRAND 9

Students will be able to perform the skills and responsibilities of a dental assistant in the front office.

### Standard 1

Identify the differences between verbal and nonverbal communications.

- Verbal-words spoken
  - Words
  - Listening skills
  - Voice inflection
- Non-verbal-body language
  - Facial expressions
  - Appearance
  - Gestures
  - Mannerisms
  - Attitudes
  - Actions

### Standard 2

Describe good phone courtesy.

- Smile
- Don't chew gum or eat
- Speak directly into the receiver
- Speak clearly and slowly
- Answer promptly
- Greet patient-identify yourself and the practice
- Ask how you can help the caller

### Standard 3

Outline the process of scheduling appointments.

- Guidelines for scheduling-units of time
- Confirmation of appointments
- Re-call

### Standard 4

Discuss the functions of computerized practice management systems.

- Patient registration
- Scheduling
- Charting
- Progress notes
- Radiographs



**Standard 5**

Identify the data gathering process and prepare a patient record.

- Registration form
- Medical-dental health history form
- Clinical examination form
- Progress note form
- Treatment plan

**Standard 6**

Define terminology related to insurance.

- Assignment of benefits
- Carrier
- Co-insurance
- Deductible
- Dependent
- Eligibility
- Exclusions
- Maximum
- Provider

**Standard 7**

Learn the common dental procedure codes.

**Diagnostic D0100–D0999**

- Clinical oral evaluations
  - D0120 Periodic oral evaluation-established patient
  - D0150 Comprehensive oral evaluation-new or established patient
- Radiographs/diagnostic imaging (including interpretation)
  - D0220 Intraoral - periapical first film
  - D0272 bitewings-two films
  - D0274 bitewings-four films
  - D0330 Panoramic film
- Tests and examinations
- Oral pathology laboratory

**Preventive D1000–D1999**

- Dental prophylaxis
  - D1110 prophylaxis-adult
  - D1120 prophylaxis- child
- Topical fluoride treatment (office procedure)
  - D1206 topical fluoride varnish
- Other preventive services
  - D1351 sealant-per tooth

**Restorative D2000–D2999**

- Resin-based composite restorations—direct

- D2330 composite-one surface, anterior
- D2331 composite-two surface, anterior
- D2332 composite-three surface, anterior
- D2335 composite-four or more surface, anterior
- D2391 composite-one surface, posterior
- D2392 composite-two surface, posterior
- D2393 composite-three surface, posterior
- D2394 composite-four or more surfaces, posterior

- Gold foil restorations
- Inlay/onlay restorations
- Crowns—single restorations only
  - D2740 crown-porcelain/ceramic
  - D2751 crown-porcelain fused to metal
  - D2792 crown-full cast noble metal
- Other restorative services
  - D2930 crown-stainless steel, child
  - D2952 post and core in addition to crown

**Endodontics D3000–D3999**

- Pulp capping
  - D3120 pulp cap-indirect (dycal)
- Pulpotomy
  - D3221 pulpal debridement
- Endodontic therapy on primary teeth
- Endodontic therapy (including treatment plan, clinical procedures, and follow-up care)
  - D3310 anterior
  - D3320 bicuspid
  - D3330 molar
- Endodontic retreatment
- Apexification/recalcification procedures
- Apicoectomy/periradicular services
- Other endodontic procedures

**Periodontics D4000–D4999**

- Surgical services (including usual postoperative care)
- Non-Surgical periodontal service
- Other periodontal services

**Removable Prosthodontics D5000–D5899**

- Complete dentures
  - D5110 complete denture-maxillary
  - D5120 complete denture-mandibular
- Partial dentures (including routine post-delivery care)
- Adjustments to dentures
- Repairs to complete dentures

- Repairs to partial dentures
- Denture rebase procedures
- Denture reline procedures
- Interim prosthesis
- Other removable prosthetic services

**Maxillofacial Prosthetics D5900–D5999**

- Prosthetic replacements
- Radiation
- Surgical splinting

**Implant Services D6000–D6199**

- Pre-surgical services
- Surgical services
  - D6010 surgical placement of implant body: endosteal implant
- Implant supported prosthetics supporting structures
- Implant/abutment supported removable dentures
- Implant/abutment supported fixed dentures (hybrid prosthesis)
- Single crowns, abutment supported
  - D6060 abutment supported porcelain fused to base metal crown
- Single crowns, implant supported
- Fixed partial denture, abutment supported
- Fixed partial denture, implant supported
- Other implant services

**Fixed Prosthodontics D6200–D6999**

- Fixed partial denture pontics
  - D6241 pontic-porcelain fused to base metal
  - D6245 pontic-porcelain/ceramic
- Fixed partial denture retainers—inlays/onlays
- Fixed partial denture retainers—crowns
  - D6721 crown-resin with base metal
  - D6740 crown-porcelain/ceramic
- Other fixed partial denture services

**Oral Surgery D7000–D7999**

- Extractions (includes local anesthesia, suturing, if needed, and routine postoperative care)
  - D7140 extraction, erupted tooth or exposed root
- Surgical extractions (includes local anesthesia, suturing, if needed, and routine postoperative care)
  - D7220 removal of impacted tooth-soft tissue
  - D7230 removal of impacted tooth-partially bony
  - D7240 removal of impacted tooth-completely bony
  - D7241 removal of impacted tooth- completely bony, with unusual surgical complications
- Other surgical procedures

- Alveoloplasty—surgical preparation of ridge for dentures
- Vestibuloplasty
- Surgical excision of soft tissue lesions
- Surgical excision of intraosseous lesions
- Excision of bone tissue
- Surgical incision
- Treatment of fractures—simple
- Treatment of fractures—compound
- Reduction of dislocation and management of other temporomandibular joint dysfunctions
- Repair of traumatic wounds
- Complicated suturing (reconstruction requiring delicate handling of tissues and wide undermining for meticulous closure)
- Other repair procedures

#### **Orthodontics D8000–D8999**

- Limited orthodontic treatment
- Interceptive orthodontic treatment
- Comprehensive orthodontic
- Minor treatment to control harmful habits
- Other orthodontic services

#### **Adjunctive General Services D9000–D9999**

- Unclassified treatment
- Anesthesia
- Professional consultation
- Professional visits
- Drugs
- Miscellaneous services (bleaching, desensitizing, occlusal analysis)

#### **Strand 9 Performance Skills Included Below**

## **STRAND 10**

**Students will be able to perform basic life support skills.**

### **Standard 1**

Describe the signs and symptoms of common medical emergencies and describe how to respond to them.

- Symptom-what a patient tells you regarding how they feel
- Sign-what you observe in a patient
- Common emergencies include:
  - Airway obstruction/choking
  - Syncope/fainting
  - Postural hypotension
  - Angina/chest pain

- Acute myocardial infarction/heart attack
- Stroke/CVA
- Hyperventilation
- Asthma attack
- Allergic reaction
- Seizure
- Diabetic shock
- Hyperglycemia
- Hypoglycemia

### **Standard 2**

Understand how to take, record, and monitor vital signs using automated systems:

- Blood pressure
- Pulse

### **Strand 10 Performance Skills Included Below**

## DENTAL SCIENCE II STRANDS and STANDARDS

### **STRAND 1**

**Students will be able to perform the skills and responsibilities expected of a dental assistant in a dental examination.**

#### **Standard 1**

Describe the role of the dental assistant in the clinical examination.

- Receive and prepare patient for treatment
  - Seating
  - Positioning chair
  - Placing napkin
  - Positioning patient chart
- Take vital signs
- Take radiographs
- Chart as per dentist dictation
- Maintain the field of operation during dental procedures

#### **Standard 2**

Explain the importance of a treatment plan.

- Treatment plan is a compilation of clinical findings and oral diagnosis by a dentist, in an outlined format for presentation purposes.
- The treatment plan must be presented and accepted by the patient before treatment is rendered.

### Standard 3

Maintain records in accordance with legal guidelines.

- Black ink
- Date
- Tooth number
- Surfaces of tooth
- Procedure performed
- All important information pertaining to treatment rendered
- Signature of individual who made the entry
- Understand how to correct an error on the patient chart.

## STRAND 2

**Students will be able to perform the skills and responsibilities expected of a dental assistant in a coronal polish and application of fluoride.**

### Standard 1

Explain the difference between an oral prophylaxis and coronal polishing.

- Oral prophylaxis-the complete removal of calculus, debris, stain, and plaque from the teeth.
- Coronal polish/rubber cup polish-a technique used to remove plaque and stains from the crown of the tooth.

### Standard 2

Explain safety precautions to be followed during coronal polish.

- Operator and patient positioning
- Polishing/bristle cups
- Polishing paste
- Proper handpiece grasp/fulcrum
- Proper handpiece operation
- Polishing strokes

### Standard 3

Outline the methods of fluoride therapy.

- Systemic
- Topical

### Standard 4

Explain the set up and use of instruments for dental sealants.

- Protective eyewear for patient and operator
- Basic set up
- Cotton rolls or dental dam
- Etchant
- Sealant material

- Applicator brush
- HVE
- Curing light and shielding
- Low speed handpiece
- Articulating paper and holder
- Dental floss

### STRAND 3

**Students will demonstrate radiological protection and infection control as they expose, evaluate, and mount dental images.**

#### Standard 1

Explain to a patient the benefits of dental imaging.

- Detect decay between the teeth in its early stages.
- Detect bone loss around the teeth.
- Detect periapical abscess.
- Detect impacted teeth.
- Evaluate patient growth and development.
- Document existing oral conditions.
- Obtain information during dental procedures.

#### Standard 2

Identify types and techniques of intraoral and extraoral radiographs/images and the purpose of each.

- Intraoral
  - Bitewing x-rays-shows crowns of both upper and lower teeth; for decay detection.
  - Periapical x-rays-used to show crown, root tip, and surrounding area to diagnose abscesses.
  - Occlusal x-rays-used to examine large areas of the jaws to identify impactions or pathological conditions.
- Extraoral
  - Panoramic x-rays-shows entire upper and lower jaw; used to locate impacted teeth, tooth eruption patterns, and lesions in the jaw.
  - Cephalometric x-rays-shows the bones and soft tissues of the facial profile; used in orthodontics.

#### Standard 3

Identify the components of the dental x-ray machine and their use including handheld devices.

- Tubehead
- Extension arm
- Control panel

#### Standard 4

Discuss methods of radiation protection for the patient during x-ray exposure.

- Take only those radiographs prescribed by the dentist.
- Use equipment that is properly maintained.
- Use the fastest speed of dental film or digital imaging to limit exposure time.
- Use proper film exposure techniques including use of film-holding devices.
- Use lead aprons and thyroid collars for all patients.

#### Standard 5

Discuss methods of radiation protection for the operator during x-ray exposure.

- Never stand directly in front of the x-ray tubehead.
- Always stand at least 6 feet from the x-ray unit, or behind a wall, during exposure.
- Use radiation monitoring to protect the operator.

#### Standard 6

Discuss infection control during x-ray procedures.

#### Standard 7

Evaluate x-rays for image quality.

- Contrast
- Density
- Image detail

#### Standard 8

Identify common exposure and technique error.

- Blurred images-movement during the exposure
- Cone cutting-x-ray beam did not cover the entire film
- Elongation-vertical angulation too flat
- Foreshortening-vertical angulation too steep
- Missing apical structures-film did not cover entire tooth
- Occlusal plane tilted-film not in proper position
- Overexposure-excessive exposure
- Overlapping-central ray not directed through interproximal space
- Underexposure-insufficient exposure

#### Standard 9

Identify radiographic landmarks for mounting intraoral films.

- Enamel
- Dentin
- Pulp
- Maxillary sinus
- Maxillary tuberosity
- Retromolar area



**Strand 3 Performance Skills Included Below****STRAND 4**

**Students will examine pain control in the dental office setting.**

**Standard 1**

Explain the set-up and protocol of a local anesthetic injection.

- Proper handling of the anesthetic syringe
- Proper handling of the anesthetic cartridge
- Proper handling of the disposable needle
- Application of a topical anesthetic

**Standard 2**

Compare local anesthetic agents with or without vasoconstrictors.

**Standard 3**

Identify the complications and precautions for dental anesthesia.

- Injection into a blood vessel-aspiration
- Toxic reaction-check patient's dental/medical history for previous reactions
- Temporary numbness-caution patient not to bite tongue, lips, and cheeks
- Paresthesia (temporary or permanent)-use only sterile solution and proper injection technique

**Standard 4**

Explain the use and procedure of nitrous oxide in dental treatment.

- Inhalation sedation
- Procedure
  - Dentist supervision
  - 100% oxygen to begin/end
  - Do not leave patient unattended – continual monitoring
  - Do not use with a pregnant patient
  - Not for recreational purposes

**Standard 5**

Describe the equipment used in nitrous oxide/oxygen analgesia.

- Cylinders
  - Blue – Nitrous
  - Green – Oxygen
- Control valve
- Flow meter
- Reservoir bag
- Gas hoses
- Mask

- Scavenger system

**Strand 4 Performance Skills Included Below**

**STRAND 5**

**Students will identify components of operative procedures and assist in patient treatment.**

**Standard 1**

Identify reasons for dental treatment.

- Treat caries, fractures, abrasions, erosion, defects in tooth structure
- Replace failed restorations
- Restore a tooth to normal function and appearance
- Improve appearance of teeth due to discoloration, developmental abnormalities, abnormal spacing, or trauma

**Standard 2**

Outline responsibilities of the dental assistant in operative dental procedures.

- Prepare treatment room.
- Know proper sequence of procedures in order to anticipate the dentist's needs during patient treatment.
- Mix materials.
- Prepare retainers.
- Assist in the following:
  - Administration of local anesthesia
  - Moisture control
  - Maintaining patient comfort
- Apply appropriate exposure control protocols.
- Perform only those expanded functions allowed by the State Dental Practice Act.

**Standard 3**

Identify handpieces and burs, their common uses in operative dentistry, and maintenance.

- Low-speed
- High-speed
- Fiber optic light
- Air abrasion
- Laser handpiece
- Burs: round, inverted cone, straight fissure plain and crosscut, pear, end cutting
- Diamonds
- Trimming and finishing burs
- Polishing disks and wheels
- Stones
- Rubber points

#### Standard 4

Outline treatment options for vital bleaching.

- In-office treatment
- At-home treatment
- Over-the-counter treatment

#### Standard 5

Explain the set up and use of instruments for a composite procedure.

- Instruments
  - Basic setup
  - Hand cutting instruments (spoon excavator)
  - Composite placement instruments
- Accessories
  - Local anesthetic setup
  - HVE tip
  - Saliva ejector
  - Three-way syringe tip
  - High and low speed handpieces with assortment of burs
  - Matrix setup including wedge
    - Mylar
    - Sectional
    - Tofflemire
  - Assortment of dental liners
  - Bases
  - Sealers and bonding agents
  - Composite materials
  - Curing light
  - Finishing burs
  - Dental floss
  - Articulating paper and holder
  - Cotton rolls
  - 2x2 gauze
  - Abrasive strips
  - Polishing kit and paste

#### Standard 6

Explain the steps for composite procedures.

- Prepare
- Etch
- Rinse
- Bond
- Cure

- Fill
- Cure
- Finish
- Record in the patient chart

**Strand 5 Performance Evaluation included below**

## DENTAL SCIENCE III STRANDS and STANDARDS

### STRAND 1

**Students will perform skills and assist with indirect prosthodontic procedures.**

#### Standard 1

Identify and explain the types of prosthetic appliances.

- Fixed
  - Crowns
  - Bridges
  - Veneers
  - Inlays/Onlays
  - Implants
- Removeable
  - Partial denture
  - Full denture

#### Standard 2

Explain the set up and use of instruments for crown and bridge procedures.

- Crown and Bridge prep tray
  - Instruments
    - Basic setup
    - Hand cutting instruments (spoon excavator)
    - Cord packing instrument
    - Crown and bridge scissors
    - Cement spatula
  - Accessories
    - Local anesthetic setup
    - HVE tip
    - Saliva ejector
    - Three-way syringe tip
    - High and low speed handpieces with assortment of burs
    - Retraction cord
    - Dental floss
    - Articulating paper and holder

- Cotton rolls
- 2x2 gauze
- Final impression material and tray
- Temporary crown material
- Temporary cement
- Crown and Bridge seat tray
  - Instruments
    - Basic setup
    - Hand cutting instruments (spoon excavator)
    - Cement spatula
    - Scaler
  - Accessories
    - Local anesthetic setup
    - HVE tip
    - Saliva ejector
    - Three-way syringe tip
    - High and low speed handpieces with assortment of burs
    - Dental floss
    - Articulating paper and holder
    - Cotton rolls
    - 2x2 gauze
    - Permanent cement/bonding
    - Bite stick

### Standard 3

Complete laboratory authorization forms.

### Standard 4

Explain how to mix cements.

- Permanent
  - Polycarboxylate
  - Glass ionomer
  - Zinc phosphate
- Temporary
  - Zinc oxide eugenol
- Liner
  - Calcium hydroxide

### Standard 5

Explain the set up and use of instruments for the delivery of removable prosthodontics (partials and dentures).

- Basic set up

- Denture
- Hand mirror
- Articulating paper and holder
- Handpieces
- Pressure indicating paste
- Finishing burs
- Acrylic burs
- Pliers

## STRAND 2

**Students will demonstrate basic knowledge of and assist with common surgical procedures.**

### Standard 1

Explain the set up and use of instruments in a simple extraction set up.

- Local anesthetic
- Basic setup
- Periosteal elevator
- Elevator (dentist choice)
- Forceps (dentist choice – tooth dependent)
- Surgical curettes
- Sterile gauze
- Surgical aspirator tip

### Standard 2

Explain the set up and use of instruments in a surgical extraction set up.

- Local anesthetic
- Basic setup
- Periosteal elevator
- Elevators (dentist choice)
- Forceps (dentist choice – tooth dependent)
- Surgical curettes
- Root tip picks
- Bone files
- Mallet and chisel
- Rongeur
- Sterile gauze
- Surgical aspirator tip
- Scalpel
- Suture
- Needle holders or hemostat

- Suture scissors
- Cheek/tissue retractor
- Handpiece and surgical bur
- Bite block

### Standard 3

Discuss post-operative instructions following extractions to a patient.

- Control of swelling
- Causes and treatment of dry-socket
- Control of post-surgical bleeding
- Diet

### Standard 4

Explain the set up and use of instruments used in suture removal.

- Basic setup
- Suture scissors
- Sterile gauze

## STRAND 3

**Students will demonstrate basic knowledge of and assist with procedures related to endodontics.**

### Standard 1

Explain the set up and use of instruments and accessories used in endodontic treatment.

- Basic setup
- Local anesthetic setup
- Dental dam setup
- Handpieces with burs
- Irrigating syringe
- Broaches and files
- Rubber stops
- Paper points
- Gutta-percha
- Sealer
- Lentulo spiral
- Endodontic spoon excavator
- Endodontic explorer
- Endodontic spreaders and pluggers
- Glick
- Mm ruler

- HVE tip
- Three-way syringe tip
- Irrigating solutions

### Standard 2

Discuss steps in the endodontic exam including the methods of pulp testing.

- Subjective
  - Pain
  - Swelling
  - Sensitivity
- Objective
  - Medical and Dental history
  - Radiographs
- Pulp testing
  - Thermal
  - Electric
  - Percussion
  - Palpation

### Standard 3

Explain the steps of a root canal procedure.

- Anesthetic
- Isolation
- Access pulp
- Debridement
- Obturation
- Post treatment instructions
- Add to patient chart

### Standard 4

Explain the set up and use of instruments for a dental dam.

- Dental dam material
- Dental dam hole punch
- Dental dam frame
- Dental dam clamps
- Dental dam forceps
- Crown and bridge scissors
- Floss
- Beaver-tail burnisher



## STRAND 4

**Student will demonstrate basic knowledge related to orthodontics.**

### Standard 1

Identify primary and permanent teeth using the Palmer numbering system.

### Standard 2

List the benefits of orthodontic treatment.

- Eliminate dental disease
- Improve function
- Decrease psycho-social issues

### Standard 3

Explain proper care, oral hygiene and dietary instructions as it relates to orthodontic appliances.

## STRAND 5

**Students will utilize materials and demonstrate skills related to in-office laboratory procedures.**

### Standard 1

Explain the set up and use of equipment found in the laboratory.

- Model trimmer
- Vacuum former
- Impression vibrator
- Dental lathe
- Lab handpiece

### Standard 2

List the three types of impressions taken in a dental office.

- Preliminary
- Final
- Bite registration

### Standard 3

Explain the set up and use of preliminary impressions.

- Alginate impression
  - Alginate powder
  - Measuring scoop
  - Water and measuring cup

- Rubber bowl
- Mixing spatula
- Upper and lower trays
- Moist paper towels
- Alginate impression pour up
  - Rubber bowl
  - Mixing spatula
  - Upper and lower impressions
  - Gypsum product
  - Water
  - Impression vibrator

## DENTAL SCIENCE IV-STRANDS AND STANDARDS

### STRAND 1

**Students will demonstrate their job seeking skills.**

#### Standard 1

Determine personal career goals and employment opportunities.

#### Standard 2

Outline techniques for successful jobs.

- Interviewing
- Methods of negotiating salaries and benefits.
- Proper termination procedures

### STRAND 2

**Students must complete a minimum of 90 hours of clinical experience in a dental office.**

#### Standard 1

Complete the Dental Assisting Clinical Application:

- Provide documentation of completion of skills competencies and fees and books paid
- Provide Hepatitis B vaccination or declination form

#### Standard 2

Complete a clinical work schedule calendar.

#### Standard 3

Provide weekly documentation of hours in attendance at clinical site and skills performed.

#### Standard 4

Upon completion of clinical hours, have clinical site complete evaluation, and return to the instructor.

### Performance Skills

#### Benchmark 1- DENTAL SCIENCE I

1. Demonstrate proper use of PPE and correct handwashing technique.
2. Obtain Hepatitis B vaccination or provide signed declination form.
3. Demonstrate methods of sterilization and disinfection.
4. Instruct a patient in oral hygiene.
5. Prepare a patient record.
6. Obtain current CPR certification.
7. Seating and dismissing patients.

#### Benchmark 2- DENTAL SCIENCE II

8. Prepare room for treatment.
9. Chart existing restorations or conditions.
10. Maintain moisture control during dental procedures.
11. Demonstrate appropriate instrument transfer.
12. Perform coronal polish.
13. Apply topical fluoride.
14. Apply pit and fissure sealants.
15. Assemble the XCP instrument.
16. Demonstrate techniques for intraoral x-rays.
  - Paralleling technique
  - Bisecting angle technique
  - Bite-wing technique
  - Occlusal technique
17. Mount radiographs.
18. Prepare for a local anesthetic injection.
  - Proper handling of the anesthetic syringe
  - Proper handling of the anesthetic cartridge
  - Proper handling of the disposable needle
  - Application of a topical anesthetic
19. Assemble matrix systems

#### Benchmark 3- DENTAL SCIENCE III

20. Set up for a crown and bridge procedure.
21. Mix cements - both temporary and permanent.
22. Prepare a set up tray for removable prosthodontics (partials and dentures).
23. Set up for a basic extraction.
24. Place and remove post-extraction dressings (2x2 gauze).
25. Set up for a suture removal.

26. Set up for basic endodontic procedures.
27. Place and remove dental dam.
28. Take preliminary impressions.
29. Pour, trim, and evaluate the quality of models.
30. Fabricate a thermal plastic tray.

**Benchmark 4- DENTAL SCIENCE IV**

31. Prepare a target resume.
32. Using professional letter format, prepare a cover letter.
33. Complete a job application.
34. Mock interview and Thank you card/letter
35. Discuss student externship evaluation with instructor.

**Workplace Skills**

Describe the characteristics of a professional dental assistant.

- Professional appearance
- Teamwork
- Attitude
- Dedication
- Responsibility
- Initiative
- Legal requirements/confidentiality
- Personal qualities
- Courtesy and respect for patients and team members
- Attendance of work hours
- Professional communication (grammar)
- Problem solving
- Critical thinking
- Dependability
- Accountability

**Skill Certificate Test Points by Strand**

Example table below. Refer to instructions for specifics.

Test Name	Test #	Number of Test Points by Standard															Total Points	Total Questions
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
Dental Assisting 1	720	3	4	3	6	9	16	3	4	4	1						68	53
Dental Assisting 2	721	3	6	9	7	10											44	35
Dental Assisting 3	722	9	9	5	3	4											36	30