

Course Outline

Health Science and Medical Technology

REVISED: August/2017

Job Title:
Dental Assistant

76-35-59

Career Pathway:
Patient Care

Dental Assisting/3

Industry Sector:
Health Science and Medical
Technology

Credits: 15

Hours: 180

O*NET-SOC CODE:
31-9091.00

Course Description:

This competency-based course is the last in a sequence of three designed for dental assisting. It provides students with project-based experiences in the dental office and clinic. Technical instruction includes an introduction, reviews of workplace safety policies and procedures, compliance issues, and employability skills, as well as introductory entrepreneurship. Emphasis is placed on dental office management procedures, dental radiography, digital radiography, and inservice clinical practice. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

CBEDS Title:
Dental Services

Prerequisites:

Enrollment requires successful completion of the Dental Assisting/2 (76-35-56) course.

CBEDS No.:
4249

NOTE: For Perkins purposes this course has been designated as a **capstone** course.

This course cannot be repeated once a student receives a Certificate of Completion.



COURSE OUTLINE COMPETENCY-BASED COMPONENTS

A course outline reflects the essential intent and content of the course described. Acceptable course outlines have six components. (Education Code Section 52506). Course outlines for all apportionment classes, including those in jails, state hospitals, and convalescent hospitals, contain the six required elements:

(EC 52504; 5CCR 10508 [b]; Adult Education Handbook for California [1977], Section 100)

COURSE OUTLINE COMPONENTS

LOCATION

GOALS AND PURPOSES

Cover

The educational goals or purposes of every course are clearly stated and the class periods are devoted to instruction. The course should be broad enough in scope and should have sufficient educational worth to justify the expenditure of public funds.

The goals and purpose of a course are stated in the COURSE DESCRIPTION. Course descriptions state the major emphasis and content of a course, and are written to be understandable by a prospective student.

PERFORMANCE OBJECTIVES OR COMPETENCIES

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Objectives should be delineated and described in terms of measurable results for the student and include the possible ways in which the objectives contribute to the student's acquisition of skills and competencies.

Performance Objectives are sequentially listed in the COMPETENCY-BASED COMPONENTS section of the course outline. Competency Areas are units of instruction based on related competencies. Competency Statements are competency area goals that together define the framework and purpose of a course. Competencies fall on a continuum between goals and performance objectives and denote the outcome of instruction.

Competency-based instruction tells a student before instruction what skills or knowledge they will demonstrate after instruction. Competency-based education provides instruction which enables each student to attain individual goals as measured against pre-stated standards.

Competency-based instruction provides immediate and continual repetition and In competency-based education the curriculum, instruction, and assessment share common characteristics based on clearly stated competencies. Curriculum, instruction and assessment in competency-based education are: explicit, known, agreed upon, integrated, performance oriented, and adaptive.

COURSE OUTLINE COMPETENCY-BASED COMPONENTS
(continued)

COURSE OUTLINE COMPONENTS

LOCATION

INSTRUCTIONAL STRATEGIES

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Instructional techniques or methods could include laboratory techniques, lecture method, small-group discussion, grouping plans, and other strategies used in the classroom.

Instructional strategies for this course are listed in the TEACHING STRATEGIES AND EVALUATION section of the course outline. Instructional strategies and activities for a course should be selected so that the overall teaching approach takes into account the instructional standards of a particular program, i.e., English as a Second Language, Programs for Adults with Disabilities.

UNITS OF STUDY, WITH APPROXIMATE HOURS ALLOTTED FOR EACH UNIT

Cover

The approximate time devoted to each instructional unit within the course, as well as the total hours for the course, is indicated. The time in class is consistent with the needs of the student, and the length of the class should be that it ensures the student will learn at an optimum level.

pp. 7-21

Units of study, with approximate hours allotted for each unit are listed in the COMPETENCY AREA STATEMENT(S) of the course outline. The total hours of the course, including work-based learning hours (community classroom and cooperative vocational education) is listed on the cover of every CBE course outline. Each Competency Area listed within a CBE outline is assigned hours of instruction per unit.

EVALUATION PROCEDURES

p. 23

The evaluation describes measurable evaluation criteria clearly within the reach of the student. The evaluation indicates anticipated improvement in performances as well as anticipated skills and competencies to be achieved.

Evaluation procedures are detailed in the TEACHING STRATEGIES AND EVALUATION section of the course outline. Instructors monitor students' progress on a continuing basis, assessing students on attainment of objectives identified in the course outline through a variety of formal and informal tests (applied performance procedures, observations, and simulations), paper and pencil exams, and standardized tests.

REPETITION POLICY THAT PREVENTS PERPETUATION OF STUDENT ENROLLMENT

Cover

After a student has completed all the objectives of the course, he or she should not be allowed to reenroll in the course. There is, therefore, a need for a statement about the conditions for possible repetition of a course to prevent perpetuation of students in a particular program for an indefinite period of time.

ACKNOWLEDGMENTS

Thanks to AARON SAENZ for developing and editing this curriculum. Acknowledgment is also given to ERICA ROSARIO for designing the original artwork for the course covers.

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**CALIFORNIA CAREER TECHNICAL EDUCATION MODEL CURRICULUM STANDARDS Health
Science and Medical Technology Industry Sector
Knowledge and Performance Anchor Standards**

1.0 Academics

Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the Health Science and Medical Technology academic alignment matrix for identification of standards.

2.0 Communications

Acquire and accurately use Health Science and Medical Technology sector terminology and protocols at the career and college readiness level for communicating effectively in oral, written, and multimedia formats.

3.0 Career Planning and Management

Integrate multiple sources of career information from diverse formats to make informed career decisions, solve problems, and manage personal career plans.

4.0 Technology

Use existing and emerging technology to investigate, research, and produce products and services, including new information, as required in the Health Science and Medical Technology sector workplace environment.

5.0 Problem Solving and Critical Thinking

Conduct short, as well as more sustained, research to create alternative solutions to answer a question or solve a problem unique to the Health Science and Medical Technology sector using critical and creative thinking, logical reasoning, analysis, inquiry, and problem-solving techniques.

6.0 Health and Safety

Demonstrate health and safety procedures, regulations, and personal health practices and determine the meaning of symbols, key terms, and domain-specific words and phrases as related to the Health Science and Medical Technology sector workplace environment.

7.0 Responsibility and Flexibility

Initiate, and participate in, a range of collaborations demonstrating behaviors that reflect personal and professional responsibility, flexibility, and respect in the Health Science and Medical Technology sector workplace environment and community settings.

8.0 Ethics and Legal Responsibilities

Practice professional, ethical, and legal behavior, responding thoughtfully to diverse perspectives and resolving contradictions when possible, consistent with applicable laws, regulations, and organizational norms.

9.0 Leadership and Teamwork

Work with peers to promote divergent and creative perspectives, effective leadership, group dynamics, team and individual decision making, benefits of workforce diversity, and conflict resolution as practiced in the Cal-HOSA career technical student organization.

10.0 Technical Knowledge and Skills

Apply essential technical knowledge and skills common to all pathways in the Health Science and Medical Technology sector, following procedures when carrying out experiments or performing technical tasks.

11.0 Demonstration and Application

Demonstrate and apply the knowledge and skills contained in the Health Science and Medical Technology anchor standards, pathway standards, and performance indicators in classroom, laboratory, and workplace settings and through the Cal-HOSA career technical student organization.

Health Science and Medical Technology

Pathway Standards

B. Patient Care Pathway

The standards for the Patient Care pathway apply to occupations or functions involved in the prevention, treatment, and management of illness and the preservation of mental and physical well-being through the services offered by the medical and allied health professions. The standards specify the knowledge and skills needed by professional-and technical personnel pursuing careers in this pathway.

Sample occupations associated with this pathway:

- ◆ Kinesiotherapist
- ◆ Nurse Anesthetist
- ◆ Respiratory Therapist
- ◆ Radiologic Technician
- ◆ Dental Hygienist

- B1.0 Recognize the integrated systems approach to health care delivery services: prevention, diagnosis, pathology, and treatment
- B2.0 Understand the basic structure and function of the human body and relate normal function to common disorders.
- B3.0 Know how to apply mathematical computations used in health care delivery system.
- B4.0 Recognize and practice components of an intake assessment relevant to patient care.
- B5.0 Know the definition, spelling, pronunciation, and use of appropriate terminology in the health care setting.
- B6.0 Communicate procedures and goals to patients using various communication strategies to respond to questions and concerns.
- B7.0 Apply observation techniques to detect changes in the health status of patients.
- B8.0 Demonstrate the principles of body mechanics as they apply to the positioning, transferring, and transporting of patients.
- B9.0 Implement wellness strategies for the prevention of injury and disease behaviors that prevent injury and illness
- B10.0 Comply with protocols and preventative health practices necessary to maintain a safe
- B11.0 Comply with hazardous waste disposal policies and procedures, including documentation, to ensure that regulated waste is handled, packaged, stored, and disposed of in accordance with federal, state, and local regulations.
- B12.0 Adhere to the roles and responsibilities, within the scope of practice, that contribute to the design and implementation of treatment planning
- B13.0 Research factors that define cultural differences between and among different ethnic, racial, and cultural groups and special populations.

CBE
Competency-Based Education

COMPETENCY-BASED COMPONENTS
for the Dental Assisting/3 Course

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
<p>A. INTRODUCTION AND SAFETY</p> <p>Review, apply, and evaluate classroom and workplace policies and procedures used in accordance with federal, state, and local safety and environmental regulations.</p>	<ol style="list-style-type: none"> 1. Review the scope and purpose of the course. 2. Review the overall course content as a part of the Linked Learning Initiative. 3. Review classroom, office, and laboratory policies and procedures. 4. Review the different occupations in the Health Science and Medical Technology Industry Sector which have an impact on the role of dental assistants. 5. Review the opportunities available for promoting gender equity and the representation of non-traditional populations in the dental assisting field. 6. Review the California Department of Consumer Affairs-Dental Board of California (CDCA-DBC) policies pertaining to the following: <ol style="list-style-type: none"> a. healthcare professional † b. Registered Dental Assistant training/educational programs c. certification requirements d. certification renewal requirements e. entry into specialty programs 7. Review the primary mission of: <ol style="list-style-type: none"> a. American Dental Assistants Association (ADAA) b. California Dental Assistants Association (CDAA) c. Dental Assisting National Board, Inc. (DANB) 8. Review the purpose of the California Occupational Safety and Health Administration (Cal/OSHA) and its laws governing dental assistants. 9. Review the impact of Environmental Protection Agency (EPA) legislation on the Health Science and Medical Terminology Industry Sector practices. 10. Review and demonstrate the procedures for contacting proper authorities for the removal of hazardous materials based on the EPA standards. 11. Review classroom and workplace first aid and emergency procedures according to American Red Cross (ARC) standards. 12. Review how each of the following insures a safe workplace: <ol style="list-style-type: none"> a. employees’ rights as they apply to job safety b. employers’ obligations as they apply to safety c. role of the Division of Workers’ Compensation (DWC) d. adherence to Universal Precautions e. following hand washing techniques f. donning and removing clean gloves g. provision of eye wash station 	<p>Career Ready Practice: 1, 2, 3, 6, 7, 8, 11</p> <p>CTE Anchor: Communications: 2.3 Career Planning and Management: 3.4, 3.5, 3.6 Problem Solving and Critical Thinking: 5.6 Health and Safety: 6.1, 6.2, 6.6, 6.7, 6.8 Responsibility and Flexibility: 7.2 Ethics and Legal Responsibilities: 8.2</p> <p>CTE Pathway: B9.1, B12.1, B12.2, B12.3, B12.4</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(2 hours)	<ul style="list-style-type: none"> h. dress requirements for dental assistants i. following safe radiography practices j. adequate ventilation for dental materials k. knowledge of Category I, II, and III of occupational exposures l. knowledge of post-exposure incident management 13. Pass the safety test with 100% accuracy.	
B. COMPLIANCE REVIEW Review the policies and procedures used to avoid fraud and abuse of laws and regulations in a day-to-day dental setting.	<ol style="list-style-type: none"> 1. Review the definition of the following: <ol style="list-style-type: none"> a. dental care claim b. compliance c. medical necessity d. coding e. bundling f. fraud g. abuse 2. Review the following: <ol style="list-style-type: none"> a. essential elements of a dental care claim program b. government anti-fraud and abuse initiative c. penalties for government fraud and abuse d. preventative measures against fraud and abuse e. role of federal, state, and private dental health carriers and agencies in assuring compliance 3. Review the economic impact of fraudulent dental practices on the society. 4. Review three cases that show: <ol style="list-style-type: none"> a. evidence of false, fraudulent, and fictitious claims b. application of corrective actions 	Career Ready Practice: 1, 2, 4, 5, 9, 10 CTE Anchor: Communications: 2.3, 2.4, 2.5, 2.6 Problem Solving and Critical Thinking: 5.6 Responsibility and Flexibility: 7.1, 7.6, 7.7 Ethics and Legal Responsibilities: 8.3, 8.7 Technical Knowledge and Skills: 10.1, 10.2 Demonstration and Application: 11.1 CTE Pathway: B1.5, B3.1, B5.1, B5.4, B5.6, B6.2, B6.3, B6.6, B12.2, B12.3, B13.6
C. OFFICE MANAGEMENT Review the policies and procedures used to avoid fraud and abuse of laws and regulations in a day-to-day dental setting.	<ol style="list-style-type: none"> 1. Describe and demonstrate the following reception techniques: <ol style="list-style-type: none"> a. courteously greeting patients b. determining nature of visit c. taking and recording accurate medical and dental histories d. taking and recording vital signs of patients 2. Describe and demonstrate the following telephone techniques: <ol style="list-style-type: none"> a. answering the call immediately b. identifying oneself and the name of the dental office c. using a clear and well-modulated voice d. listening carefully e. thanking the caller 	Career Ready Practice: 1, 2, 4, 5, 6, 7, 9, 10, 12 CTE Anchor: Academics: 1.0

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
	<ol style="list-style-type: none"> 3. Describe and demonstrate the following scheduling and recall techniques: <ol style="list-style-type: none"> a. creating, using, and updating a call list, cancellation list, and emergency list b. making entries in an appointment book c. confirming appointments d. prescheduling or making advance appointments e. establishing, maintaining, and updating an online calendar, an answering service, and/or a recall system 4. Identify examples of and describe the following types of electronic programs for: <ol style="list-style-type: none"> a. patient record b. insurance information c. appointment d. billing e. inventory 5. Describe and demonstrate the following letter writing techniques: <ol style="list-style-type: none"> a. identifying and using elements of a good business letter b. identifying and using the parts of a letter c. identifying and using different styles of letters 6. Describe and demonstrate the following recording and filing techniques: <ol style="list-style-type: none"> a. establishing, maintaining, and updating a dental filing system b. establishing/maintaining a record protection system c. establishing/maintaining active/inactive file system d. determining the length of time patient records should be stored e. checking before transferring files from active to inactive f. determining procedure to be followed for records leaving the dental office 7. Describe and demonstrate the following bookkeeping and collection techniques: <ol style="list-style-type: none"> a. navigating basic bookkeeping systems b. identifying payments of choice by patients c. navigating and maintaining a pegboard accounting system <ol style="list-style-type: none"> i. creating, maintaining, and using patient charge slip ii. creating, maintaining, and using ledger card iii. creating, maintaining, and using a daily log d. depositing bank slips e. writing and balancing company checks f. interpreting company bank statements and verifying the transactions conducted for a checking account g. using company and patient bank credit cards for service provided h. obtaining credit reports for patients requesting the transaction i. using the appropriate billing method j. reading billing statements 	<p>Problem Solving and Critical Thinking: 5.6</p> <p>Health and Safety: 6.1, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8</p> <p>Technical Knowledge and Skills: 10.1, 10.2, B10.3, 10.4</p> <p>Demonstration and Application: 11.1</p> <p>CTE Pathway: B2.1, B2.3, B2.4, B3.2, B4.1, B4.5, B9.1, B9.3, B9.6, B10.2, B10.4, B11.2, B11.3, B11.4, B12.1, B12.3, B12.4</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(25 hours)	<ul style="list-style-type: none"> k. using the appropriate collection method for delinquent patient accounts l. identifying and analyzing the contents of W-2 forms m. identifying and analyzing the deductions usually deducted from an employee's check n. identifying and analyzing the Quarterly Federal Tax Return <p>8. Describe and demonstrate the following insurance billing techniques:</p> <ul style="list-style-type: none"> a. identifying the different types of health care programs b. recognizing and verifying the elements of a comprehensive coverage c. contacting insurance companies for incentive co-payment plans d. completing claim forms <p>9. Describe and demonstrate the following inventory-taking techniques:</p> <ul style="list-style-type: none"> a. maintaining a working inventory b. identifying the consumable, disposable, and non-expendable items in the office c. recognizing the "reorder point" d. filling a master file card for inventory purposes e. determining "reorder quantity" f. filling in requisition and purchase order forms 	
<p>D. DENTAL RADIOGRAPHY</p> <p>Understand, apply and evaluate the principles and practices used in dental radiography.</p>	<ul style="list-style-type: none"> 1. Identify and describe the following: <ul style="list-style-type: none"> a. state licensing requirements for dental radiography b. requirements to receive a certificate in dental radiography 2. Define the following: <ul style="list-style-type: none"> a. intraoral tasks b. direct supervision c. indirect supervision d. radiography e. X-radiation f. collimation g. filtration h. milliamperage i. kilovoltage j. density k. contrast l. detail m. emulsion n. conecutting o. overlapping p. elongation q. foreshortening 3. Identify, label, and describe the functions of the parts of X-ray tube. 	<p>Career Ready Practice: 1, 2, 4, 5, 6, 7, 9, 10, 12</p> <p>CTE Anchor: Technical Knowledge and Skills: 10.1</p> <p>CTE Pathway: B2.1, B3.2, B4.5, B9.1, B9.3, B9.6, B10.2, B10.4, B11.2, B11.3, B11.4, B12.1, B12.3, B12.4</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
	<ol style="list-style-type: none"> 4. Describe the following: <ol style="list-style-type: none"> a. common characteristics of X-radiation b. production of X-radiation c. measurement of X-radiation d. body tissue reaction to X-radiation e. benefits of X-radiation f. hazards of X-radiation g. provision of the California Radiation Protection regulations for dentistry 5. Identify and describe the following: <ol style="list-style-type: none"> a. types of films used in intra-oral X-ray techniques b. function of the film packet c. components of X-ray film d. factors that determine the speed of the film e. problem areas in quality control during processing f. film position and positioning of the central beam to expose structures g. difference between radiolucent and radiopaque h. differences between long cone paralleling and bisected angle techniques i. Extension Cone Paralleling (XCP) instrument parts j. locator ring, indicator rod, and bite block and their uses k. precision instruments and their uses and assembly l. a Snap-a-Ray and its use m. occlusal film and its use n. cephalometric X-rays and their use 6. Describe and demonstrate the following radiograph processing sequence: <ol style="list-style-type: none"> a. handling X-ray film b. unwrapping film, holding by the edge c. placing film on racks d. processing films in developer, water, fixer, and water e. processing films in an automatic processor 7. Identify and describe the following: <ol style="list-style-type: none"> a. bony structure of the mandible and maxilla using a skull b. locate the teeth, bone, and fillings c. locate facial landmarks used by X-ray operators d. labeling diagrams of various anatomic landmarks e. differentiate between bitewing mounting and periapical mounting f. criteria for determining the right side from the left side of a dental arch on a single film g. criteria for an evaluation of a bitewing survey 8. Describe and demonstrate the following radiation guidelines: <ol style="list-style-type: none"> a. obtaining a patient medical history b. standing six feet away from the X-ray c. standing behind a wall containing lead shielding d. using a lead apron and thyroid collar on a mannequin-patient e. using safety methods and devices necessary for exposure of dental X-rays 	

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
	<ul style="list-style-type: none"> f. exposure time needed to the production of diagnostic quality film g. care of dental X-ray equipment h. using an X-ray view box i. placing dental X-rays in proper X-ray mount for evaluation <p>9. Describe and demonstrate the following X-ray retake techniques:</p> <ul style="list-style-type: none"> a. identifying X-rays requiring retakes b. retaking X-rays according to retake policy c. preparing patient for second set of bitewing X-rays following patient preparation guidelines d. taking, processing, mounting, and evaluating the second set of bitewing X-rays <p>10. Pass the radiation safety test with 100% accuracy.</p> <p>11. Describe and demonstrate the following:</p> <ul style="list-style-type: none"> a. using a mannequin b. using barriers and sterilization methods in radiography c. opening a film packet d. hand washing and glove placement e. using overgloves in preparation of a patient f. placing disposable barriers on X-ray cone, handles, and exposure switch g. seating a mannequin h. positioning a mannequin with occlusal plane parallel to the floor i. placement of lead apron and thyroid collar j. instructing “mannequin-patient” to remove eyeglasses, facial jewelry, removable dental appliances, and closing eyes during the procedure k. evaluating a patient’s medical history l. placing the paper cup in a lead lined container m. removal of overgloves n. removing film for exposure o. examining mannequin’s mouth to note condition p. identifying the cones used in dental radiography q. placing cone close to position it will be used for exposure r. selecting the type and number of films required to make an interproximal survey s. selecting bitewing tabs or holder used in the bitewing exposure t. placing premolar film on the right side of mannequin <p>12. Describe and demonstrate the following techniques:</p> <ul style="list-style-type: none"> a. assembling holders for both paralleling and bisected techniques b. preparing patient for full mouth X-rays following patient preparation guidelines on a mannequin c. selecting type and number of films required to make a full mouth set of X-rays d. selecting holder used in periapical exposures e. exposing, on the upper and lower arch, both right and left side central laterals 	

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
	<ul style="list-style-type: none"> f. exposing, on the upper and lower arch, both right and left side canines g. exposing, on the upper and lower arch, both right and left side premolars h. exposing, on the upper and lower arch, both right and left side molars i. exposing four bitewing X-rays to complete the full mouth set j. processing full mouth X-rays k. evaluating full mouth X-rays l. identifying a radiographic image that is too dense m. methods of correcting images that are too dense n. identifying a radiographic image that is missing apices o. methods of correcting images that are missing apices p. identifying a radiographic image that has a herringbone, cross hatched, or stippled pattern q. identifying radiographic images that have two superimposed images on one film r. identifying and correcting cone cutting s. identifying and correcting overlapping t. identifying and correcting elongation u. identifying and correcting foreshortening v. identifying and correcting errors that could occur in the darkroom w. identifying and correcting exposure errors x. instructing “mannequin-patient” to close eyes y. exposing premolar film z. removing and placing in lead lined box aa. placing molar film in the right side bb. exposing molar film cc. placing and exposing X-rays on left side of “mannequin-patient” <p>13. Describe and demonstrate the following techniques for the second set of full mouth X-rays on a mannequin:</p> <ul style="list-style-type: none"> a. preparing mannequin by adhering to the patient preparation guidelines b. selecting the type and number of films required c. selecting holder used in periapical exposures exposing, on the upper and lower arch, both right and left side canines d. exposing, on the upper and lower arch, both right and left side premolars e. exposing, on the upper and lower arch, both right and left side molars f. exposing four bite-wing X-rays g. processing and evaluating the second set of full mouth X-rays <p>14. Describe and demonstrate the following techniques for the first set of full mouth X-rays:</p> <ul style="list-style-type: none"> a. preparing patient by adhering to patient preparation guidelines b. selecting the type and number of films required c. selecting holder used in periapical exposures 	

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
	<ul style="list-style-type: none"> d. exposing, on the upper and lower arch, both right and left side central laterals e. exposing, on the upper and lower arch, both right and left side canines f. exposing, on the upper and lower arch, both right and left side premolars g. exposing, on the upper and lower arch, both right and left side molars h. exposing four bite-wing X-rays i. processing, mounting, and evaluating the first full mouth X-rays on a patient <p>15. Describe and demonstrate the following techniques for the second set of full mouth X-rays:</p> <ul style="list-style-type: none"> a. preparing patient by adhering to patient preparation guidelines b. selecting holder used in periapical exposures c. exposing, on the upper and lower arch, both right and left side central laterals d. exposing, on the upper and lower arch, both right and left side canines e. exposing, on the upper and lower arch, both right and left side premolars f. exposing, on the upper and lower arch, both right and left side molars g. exposing four bite-wing X-rays h. processing, mounting, and evaluating the second full mouth X-rays on a patient <p>16. Describe and demonstrate the following techniques for the third set of full-mouth X rays:</p> <ul style="list-style-type: none"> a. preparing patient by adhering to patient preparation guidelines b. selecting holder used in periapical exposures c. exposing, on the upper and lower arch, both right and left side central laterals d. exposing, on the upper and lower arch, both right and left side canines e. exposing, on the upper and lower arch, both right and left side premolars f. exposing, on the upper and lower arch, both right and left side molars g. exposing four bite-wing X-rays h. processing, mounting, and evaluating the third full mouth X-rays on a patient <p>17. Describe and demonstrate the following techniques for the fourth set of full mouth X-rays:</p> <ul style="list-style-type: none"> a. preparing patient by adhering to patient preparation guidelines b. selecting holder used in periapical exposures c. exposing, on the upper and lower arch, both right and left side central laterals 	

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(30 hours)	<ul style="list-style-type: none"> d. exposing, on the upper and lower arch, both right and left side canines e. exposing, on the upper and lower arch, both right and left side premolars f. exposing, on the upper and lower arch, both right and left side molars g. exposing four bite-wing X-rays h. processing, mounting, and evaluating the fourth full mouth X-rays on a patient 	
<p>E. DIGITAL RADIOGRAPHY</p> <p>Understand, apply, and evaluate the principles and practices used in dental digital radiography</p> <p>(10 hours)</p>	<ul style="list-style-type: none"> 1. Define the following: <ul style="list-style-type: none"> a. digital radiography b. sensor c. computer d. monitor 2. Describe the different types of digital images: <ul style="list-style-type: none"> a. direct (requires a sensor) b. indirect (requires a conventional dental radiograph) c. semi-indirect (requires a photostimuable phosphor plate [PSP] and a special scanner) 3. Describe the advantages of digital radiography: <ul style="list-style-type: none"> a. eco-friendly b. reduced radiation exposure c. efficiency d. lower cost per image e. superior gray scale resolution f. ease of information transfer g. enhanced patient education 4. Describe the following concerns regarding digital radiography: <ul style="list-style-type: none"> a. high upfront cost b. costly maintenance and service repairs c. thicker and bulkier sensors d. infection control e. infrastructure (processing and storage capabilities) f. legal concerns 5. Describe and demonstrate the proper use, maintenance, and storage of digital radiographic equipment. 	<p>Career Ready Practice: 1, 2, 4, 5, 6, 7</p> <p>CTE Anchor: Health and Safety: 6.4, 6.6 Responsibility and Flexibility: 7.1 Ethics and Legal Responsibilities: 8.2 Technical Knowledge and Skills: 10.1, 10.2 Demonstration and Application: 11.1</p> <p>CTE Pathway: B12.1, B12.3, B12.4</p>
<p>F. EMPLOYABILITY SKILLS REVIEW</p> <p>Review, apply, and evaluate the employability skills required in dental assisting.</p>	<ul style="list-style-type: none"> 1. Review employer requirements for the following: <ul style="list-style-type: none"> a. punctuality b. attendance c. attitude toward work d. quality of work e. teamwork f. timeliness g. communication skills 2. Update list of potential employers through traditional and internet sources. 	<p>Career Ready Practice: 1, 2, 3, 4, 5, 7, 8, 10</p> <p>CTE Anchor: Career Planning and Management: 3.3, 3.8, 3.9 Technology: 4.1</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(3 hours)	<ol style="list-style-type: none"> 3. Review the role of electronic social networking in job search. 4. Finalize sample résumés. 5. Review the importance of filling out a job application legibly, with accurate and complete information. 6. Complete sample job application forms correctly. 7. Review the importance of enthusiasm on a job. 8. Review the importance of appropriate appearance on a job. 9. Review the importance of the continuous upgrading of job skills. 10. Review the importance of customer service as a method of building permanent relationships between the organization and the dental patient. 11. Review and demonstrate appropriate interviewing techniques. 12. Review the informational materials and resources needed to be successful in an interview. 13. Review and demonstrate appropriate follow-up procedures. 	<p>Responsibility and Flexibility: 7.2, 7.4, 7.7</p> <p>Ethics and Legal Responsibilities: 8.3, 8.4</p> <p>Leadership and Teamwork: 9.1, 9.2, 9.3</p> <p>Technical Knowledge and Skills: 10.3</p> <p>Demonstration and Application: 11.1</p> <p>CTE Pathway: B9.1, B12.1, B12.2, B12.3, B12.4</p>
<p>G. ENTREPRENEURIAL SKILLS</p> <p>Understand, apply, and evaluate the process involved in becoming an entrepreneur.</p> <p>(3 hours)</p>	<ol style="list-style-type: none"> 1. Define entrepreneurship. 2. Describe the contributions of entrepreneurs to the dental field. 3. Describe the necessary characteristics of successful entrepreneurs. 4. Describe and evaluate the following variables necessary to become an entrepreneur in the dental field: <ol style="list-style-type: none"> a. opportunities b. options c. resources 5. Identify personal goals prior to opening a business. 6. Explain the purpose of a business plan. 7. Identify and evaluate sources of monetary investment in a business opportunity. 8. Develop a scenario depicting the student as the manager of a dental office. 	<p>Career Ready Practice: 1, 2, 3, 10</p> <p>CTE Anchor: Career Planning and Management: 3.7, 3.9</p> <p>Technology: 4.3</p> <p>Problem Solving and Critical Thinking: 5.4</p> <p>Demonstration and Application: 11.3, 11.4</p> <p>CTE Pathway: B12.2</p>
<p>H. INSERVICE CLINICAL PRACTICE</p> <p>Understand, apply, and evaluate chairside assisting practices in clinical facilities.</p>	<ol style="list-style-type: none"> 1. Describe and demonstrate the following: <ol style="list-style-type: none"> a. providing preventative dentistry education to the patient to include tooth brushing techniques, flossing, disclosing, nutritional counseling, and evaluation b. seating, draping, and informing a patient about a procedure c. identifying, operating, and maintaining hand pieces 	<p>Career Ready Practice: 1, 2, 4, 6, 7, 8, 10</p> <p>CTE Anchor: Communications: 2.3, 2.4, 2.5, 2.6</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
	<ul style="list-style-type: none"> d. identifying, placing, and removing rotary instruments from the hand piece e. identifying, preparing, and passing anesthetic solutions f. operating the dental chair and unit <p>2. Describe and demonstrate:</p> <ul style="list-style-type: none"> a. clocking positions for the operator, assistant, and patient b. seating positions and posture c. passing and retrieving instrument, dental materials, local anesthesia, and other items d. oral evacuation and washed field technique for procedures in each quadrant e. tongue and cheek retraction <p>3. Identify the hand cutting instruments by formula numbers, recognize their sizes by sight, and demonstrate the timing and proper passing of the following instruments:</p> <ul style="list-style-type: none"> a. cleoid-discoids ordinary hatchets and hoes b. angle formers c. gingival margin trimmers d. special hoes e. gold knives f. side cutting instruments g. enamel hatchets h. chisels-Wedelstaedt, straight, and biangle <p>4. Describe and demonstrate the following disinfection procedures:</p> <ul style="list-style-type: none"> a. soaking b. ultrasonic cleaning c. rinsing d. drying e. bagging <p>5. Demonstrate the following:</p> <ul style="list-style-type: none"> a. preparing chemical solutions for disinfection/presoak b. preparing instruments for sterilization <p>6. Describe and demonstrate the operation of the following equipment/apparatus according to manufacturer's instructions:</p> <ul style="list-style-type: none"> a. Bard-Parker chemical solution container b. ultra sonic instrument cleaner c. Pelton Crane Autoclave d. Harvey Chemiclave Chemical Vapor Sterilizer e. Ritter SpeedClave <p>7. Describe and demonstrate the following:</p> <ul style="list-style-type: none"> a. preparation of an amalgam set-up for both class I and class II procedures b. mixing of an amalgam to given specifications and assist in instrumentation steps for cavity preparation, condensation carving, and finishing of the restoration c. punching the rubber dam to given specifications; assist with its application and removal 	<p>Problem Solving and Critical Thinking: 5.2, 5.4, 5.6</p> <p>Health and Safety: 6.3, 6.6</p> <p>Responsibility and Flexibility: 7.1, 7.6, 7.7</p> <p>Ethics and Legal Responsibilities: 8.3, 8.7</p> <p>Leadership and Teamwork: 9.7</p> <p>Technical Knowledge and Skills: 10.1, 10.2, 10.3</p> <p>Demonstration and Application: 11.1</p> <p>CTE Pathway: B1.2, B1.4, B3.1, B5.1, B5.4, B5.6, B6.2, B6.3, B6.4, B6.6, B7.3, B10.6, B12.1, B12.3, B12.4, B13.6</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
	<ul style="list-style-type: none"> d. mixing the following dental cements to given specifications for application as bases, liner, temporary fillings, or for temporary or permanent cementation of crowns and bridges: <ul style="list-style-type: none"> i. zinc oxide eugenol ii. zinc phosphate iii. calcium hydroxide iv. polycarboxylate cements v. glass ionomer e. preparation of hydrocolloid material in the conditioning unit by placing the material in the boiling, storage, and tempering baths f. assistance in taking hydrocolloid impressions at the chairside utilizing both the single bite and double bite techniques 8. Describe and demonstrate the following: <ul style="list-style-type: none"> a. setting up trays for endodontic procedures and maintain asepsis b. assisting in pulpotomy, pulp capping, pulpectomy, apicoectomy, incision drainage, fistulation, and taking of endodontic cultures 9. Identify and discuss the functions of the following: <ul style="list-style-type: none"> a. broaches b. reamers c. files d. gutta percha points e. test file gauge f. rubber steps g. Luer-lock syringes h. gutta percha pluggers and spreaders i. Gates Glidden endodontic drills j. sutures, needles, and holder k. absorbent paper points l. test tubes for endodontic cultures m. surgical scalpel n. tissue retractor o. periodontal curette p. surgical curette q. irrigating solutions (peroxide, sodium hypochlorite, and anesthetic carpules) r. enlargement solution (EDTA) s. disinfecting solutions (beechwood creosote, phenol) 10. Take alginate impressions for study models or as non-working models and pour these models in either stone or plaster with care being given not to trap air bubbles. 11. Trim study models to given specifications so that they are symmetrical and aesthetic. 12. Chart existing, abnormal, and pathological conditions as dictated by the dentist and record treatment on the patient's chart with 100% accuracy. 	

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
	<p>13. Assist in oral surgery procedures by preparing the operator, patient, set-ups, aspirating, instrumentation, and maintaining the doctor's visibility at all times; maintain asepsis before and during the procedures.</p> <p>14. Identify and discuss the functions of the following instruments:</p> <ul style="list-style-type: none"> a. root elevator b. root tip picks c. surgical scissors d. tissue retractor e. mouth prop (gag) f. tissue forceps g. sutures h. forceps: <ul style="list-style-type: none"> i. #150,150A ii. #99C iii. #1 iv. #151,151A v. #65 vi. #16 vii. #88R, 88L viii. #222 ix. #MD3 x. #53, 53L xi. #23 xii. #18R, 18L <p>15. Set up and assist with dental prophylaxis and application of fluorides to the teeth.</p> <p>16. State the actions of sodium fluoride solutions, acidulated phosphate fluoride preparations and assist the dentist in their application.</p> <p>17. Identify and discuss the functions of the following items:</p> <ul style="list-style-type: none"> a. periodontal probe b. sickle scaler c. jacquette scalers (curved and straight) d. hoe scaler e. chisel scaler f. universal curette g. dappen dish h. finger cup i. pumice j. right angle hand pieces (snap and screw on) k. porte polishers l. prophy cup and brushes m. burlew discs n. silicone points o. bristle brushes 	

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
	<p>18. Prepare tray set-up for the following periodontic procedures:</p> <ol style="list-style-type: none"> a. chart and record treatment b. give postoperative instructions c. mix and assist with placement and removal of periodontal surgical dressing d. assist in instrumentation during surgical dressing e. assist in instrumentation during surgical procedures <p>19. Identify and discuss the function of the following instruments:</p> <ol style="list-style-type: none"> a. probe b. sickle scaler c. jacquette scaler d. hoe scaler e. periodontal files f. periodontal pocket marker g. chisel scaler h. periodontal knives i. curettes <p>20. Assist in crown and bridge preparation, fabricate temporary restorations (crown or bridge), and take impressions and cementation of both temporary restorations and permanent restorations.</p> <p>21. Mix silicone and rubber base materials for impressions for permanent restorations.</p> <p>22. Mix the following materials:</p> <ol style="list-style-type: none"> a. optosil xantopren b. permalastic rubber base material c. elasticon impression material <p>23. Assist in the preparation of pit and fissure sealants, including acid etching.</p> <p>24. Assist in orthodontic procedures which include:</p> <ol style="list-style-type: none"> a. identification of instruments b. fabrication and fitting of bands c. mixing of cement for bands d. selecting and placing arch wires e. instructing patient in corrective treatment of habits and hygiene f. taking alginate impressions for study models g. exposing intra- and extra-oral radiographs h. removing ligature wires i. removing arch wires j. placing of elastic separators k. checking for loose bands l. fabrication of retainers <p>25. Expose intra-oral and extra-oral radiographs using either bisecting or paralleling techniques and process them utilizing both the time and temperature method and the automatic processor. (The films are to be of diagnostic quality when mounted and presented.)</p> <p>26. Assume duties of office management with either the dentist's approval or supervisory personnel and demonstrate the ability to:</p> <ol style="list-style-type: none"> a. schedule patients for appointments 	

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(105 hours)	<ul style="list-style-type: none"> b. demonstrate bookkeeping with added emphasis on the pegboard c. make financial arrangements d. fill out insurance claim forms e. exhibit good telephone technique f. order supplies and keep them at acceptable levels g. compose and type imperative business letters h. file records utilizing alphabetic, numeric, or chronological order i. send out reminders for recall j. assist with making financial arrangements with supervisor k. assist in sending out statements or collection letters <p>27. Demonstrate positive interaction techniques with personnel, patient and family members.</p>	

SUGGESTED INSTRUCTIONAL MATERIALS and OTHER RESOURCES

TEXTBOOKS

Bird, Doni L. and Debbie S. Robinson. Torres and Ehrlich Modern Dental Assisting, 9th Edition. Elsevier Science, April 2008.

Boyd, Linda Bartolomucci. Dental Instruments: A Pocket Guide, 3rd Edition. Elsevier Science, 2008.

Dofka, Charline M. Dental Terminology, 2nd Edition. Cengage Learning, 2007.

Fehrenbach, Margaret J. and Susan W. Herring. Illustrated Anatomy of the Head and Neck, 3rd Edition. Elsevier Science, 2006.

Gage, Tommy W. and James W. Little. Mosby's 2007 Dental Drug Consult, 9th Edition. Elsevier Science, 2006.

Phinney, Donna J. and Judy H. Halstead. Dental Assisting: A Comprehensive Approach, 3rd Edition. Cengage Learning, 2007.

Saunders. Dental Anatomy Coloring Book, 1st Edition. Elsevier Health Sciences, 2007.

RESOURCES

Teacher prepared slides, films, transparencies, and instructional packages.

Employer Advisory Board members

Knowledge and Performance Anchor Standards:

<http://www.cde.ca.gov/ci/ct/sf/documents/healthmedical.pdf>

Standards for Career Ready Practice:

<http://www.cde.ca.gov/ci/ct/sf/documents/ctescrpflyer.pdf>

[American Dental Assistants Association \(ADAA\)](#), 35 E. Wacker Dr., Suite 1730, Chicago, IL 60601. Phone: (312) 541-1550. Fax: (312) 541-1496.

[American Dental Association \(ADA\)](#), 211 E. Chicago Ave., Suite 1814, Chicago, IL 60611. Phone: (312) 440-2500.

[Dental Assisting National Board \(DANB\)](#), 444 N Michigan Ave., Suite 900, Chicago, IL 60611. Phone: (800) 367-3262. Fax: (312) 642-1475. <http://www.danb.org/Main/statespecificinfo.asp>

[Department of Consumer Affairs – Dental Board of California](#), 2005 Evergreen St., Suite 1550, Sacramento, CA 95815. Phone: (877) 729-7789. <http://www.dbc.ca.gov/licensees/rda/renewals.shtml>

COMPETENCY CHECKLIST

TEACHING STRATEGIES and EVALUATION

METHODS AND PROCEDURES

- A. Lectures and discussions
- B. Multimedia presentation
- C. Demonstrations and participation
- D. Individualized instruction
- E. Peer teaching
- F. Role-playing
- G. Guest speakers
- H. Field trips and field study experiences
- I. Projects
- J. Laboratory practice
- K. Clinical practice

EVALUATION

SECTION A – introduction and Safety – Pass the safety test with a score of 100%.

SECTION B – Compliance Review – Pass all assignments and exams on compliance review with a minimum score of 80% or higher.

SECTION C – Office Management – Pass all assignments and exams on office management with a minimum score of 80% or higher.

SECTION D – Dental Radiography – Pass all assignments and exams on dental radiography with a minimum score of 80% or higher.

SECTION E – Digital Radiography – Pass all assignments and exams on digital radiography with a minimum score of 80% or higher.

SECTION F – Employability Skills Review – Pass all assignments and exams on employability skills review with a minimum score of 80% or higher.

SECTION G – Entrepreneurial Skills – Pass all assignments and exams on entrepreneurial skills with a minimum score of 80% or higher.

SECTION H – In-Service Clinical Practice – Pass all assignments and exams on in-service clinical practice with a minimum score of 80% or higher.

Statement for Civil Rights

All educational and vocational opportunities are offered without regard to race, color, national origin, gender, or physical disability.
