

# Course Outline

Health Science and Medical Technology

REVISED: August/2017

**Job Title:**

Dental Assistant

**76-35-56**

**Career Pathway:**

Patient Care

## Dental Assisting/2

**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 second in a sequence of three designed for dental assisting. It provides students with project-based experiences in chairside assisting and dental emergency procedures. Technical instruction includes an introduction, review of workplace safety policies and procedures, compliance review, dental mathematics, resource management, and employability skills. Emphasis is placed on procuring a patient's medical/dental history and vital signs, completion of a dental chart, and the instruments/materials/techniques used in chairside procedures and dental emergencies. 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/1 (76-35-53) course.

**CBEDS No.:**

4249

**NOTE:** For Perkins purposes this course has been designated as a **concentrator** 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. 7-16

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**

pp. 18-19

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/2 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"> <li>1. Review the scope and purpose of the course.</li> <li>2. Review the overall course content as a part of the Linked Learning Initiative.</li> <li>3. Review classroom, office, and laboratory policies and procedures.</li> <li>4. Review the different occupations in the Health Science and Medical Technology Industry Sector which have an impact on the role of dental assistants.</li> <li>5. Review the opportunities available for promoting gender equity and the representation of non-traditional populations in the dental assisting field.</li> <li>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"> <li>a. healthcare professional †</li> <li>b. Registered Dental Assistant training/educational programs</li> <li>c. certification requirements</li> <li>d. certification renewal requirements</li> <li>e. entry into specialty programs</li> </ol> </li> <li>7. Review the primary mission of:               <ol style="list-style-type: none"> <li>a. American Dental Assistants Association (ADAA)</li> <li>b. California Dental Assistants Association (CDAA)</li> <li>c. Dental Assisting National Board, Inc. (DANB)</li> </ol> </li> <li>8. Review the purpose of the California Occupational Safety and Health Administration (Cal/OSHA) and its laws governing dental assistants.</li> <li>9. Review the impact of Environmental Protection Agency (EPA) legislation on the Health Science and Medical Terminology Industry Sector practices.</li> <li>10. Review and demonstrate the procedures for contacting proper authorities for the removal of hazardous materials based on the EPA standards.</li> <li>11. Review classroom and workplace first aid and emergency procedures according to American Red Cross (ARC) standards.</li> <li>12. Review how each of the following insures a safe workplace:               <ol style="list-style-type: none"> <li>a. employees’ rights as they apply to job safety</li> <li>b. employers’ obligations as they apply to safety</li> <li>c. role of the Division of Workers’ Compensation (DWC)</li> <li>d. adherence to Universal Precautions</li> <li>e. following hand washing techniques</li> </ol> </li> </ol>	<p><b>Career Ready Practice:</b> 1, 2, 3, 7, 8, 11</p> <p><b>CTE Anchor:</b> 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><b>CTE Pathway:</b> B9.1, B12.1, B12.2, B12.3, B12.4</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(3 hours)	<ul style="list-style-type: none"> <li>f. donning and removing clean gloves</li> <li>g. provision of eye wash station</li> <li>h. dress requirements for dental assistants</li> <li>i. following safe radiography practices</li> <li>j. adequate ventilation for dental materials</li> <li>k. knowledge of Category I, II, and III of occupational exposures</li> <li>l. knowledge of post-exposure incident management</li> </ul> <p>13. Pass the safety test with 100% accuracy.</p>	
<p>B. DENTAL MATHEMATICS</p> <p>Understand and apply the mathematical skills required in dental assisting.</p> <p>(5 hours)</p>	<ul style="list-style-type: none"> <li>1. Describe the practical applications of math in dental assisting.</li> <li>2. Describe and demonstrate problem-solving techniques involving whole number problems using arithmetic operations (addition, subtraction, multiplication, and division).</li> <li>3. Describe and demonstrate problem-solving techniques involving various fraction problems using arithmetic operations.</li> <li>4. Describe and demonstrate problem-solving techniques involving various decimal problems using addition, subtraction, multiplication, and division.</li> <li>5. Describe and demonstrate techniques for changing fractions to decimals.</li> <li>6. Describe and demonstrate techniques for changing decimals to fractions.</li> <li>7. Describe the English and metric systems of measuring length.</li> <li>8. Describe the English and metric systems of measuring weight.</li> <li>9. Describe the English and metric systems of measuring volume or capacity.</li> <li>10. Describe and demonstrate English and metric problem-solving techniques for various measuring problems using arithmetic operations.</li> <li>11. Describe and demonstrate English and metric measuring techniques of objects by using tools common to the industry.</li> <li>12. Express metric units in ascending and descending powers of ten.</li> <li>13. Convert the English numbering system to metric system.</li> <li>14. Convert metric system to English numbering system.</li> <li>15. Calculate square roots of English numbers.</li> <li>16. Describe and demonstrate techniques for using a calculator.</li> <li>17. Describe and demonstrate techniques for decreasing the quantities in dental assisting formulas.</li> <li>18. Describe and demonstrate techniques for increasing the quantities in dental assisting formulas.</li> </ul>	<p><b>Career Ready Practice:</b> 1, 2, 4, 5, 10</p> <p><b>CTE Anchor:</b> Academics: 1.0 Problem Solving and Critical Thinking: 5.5 Demonstration and Application: 11.1</p> <p><b>CTE Pathway:</b> B9.1, B12.1, B12.2, B12.3, B12.4</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
<p>C. COMPLIANCE REVIEW</p> <p>Review the policies and procedures used to avoid fraud and abuse of laws and regulations in a day-to-day dental setting.</p> <p>(2 hours)</p>	<ol style="list-style-type: none"> <li>1. Review the definition of the following:               <ol style="list-style-type: none"> <li>a. dental care claim</li> <li>b. compliance</li> <li>c. medical necessity</li> <li>d. coding</li> <li>e. bundling</li> <li>f. fraud</li> <li>g. abuse</li> </ol> </li> <li>2. Review the following:               <ol style="list-style-type: none"> <li>a. essential elements of a dental care claim program</li> <li>b. government anti-fraud and abuse initiative</li> <li>c. penalties for government fraud and abuse</li> <li>d. preventative measures against fraud and abuse</li> <li>e. role of federal, state, and private dental health carriers and agencies in assuring compliance</li> </ol> </li> <li>3. Review the economic impact of fraudulent dental practices on the society.</li> <li>4. Review three cases that show:               <ol style="list-style-type: none"> <li>a. evidence of false, fraudulent, and fictitious claims</li> <li>b. application of corrective actions</li> </ol> </li> </ol>	<p><b>Career Ready Practice:</b> 2</p> <p><b>CTE Anchor:</b> Ethics and Legal Responsibilities: 8.2, 8.4</p> <p><b>CTE Pathway:</b> B12.1, B12.2</p>
<p>D. RESOURCE MANAGEMENT</p> <p>Understand the basic principles and procedures of resource management in dental assisting.</p> <p>(5 hours)</p>	<ol style="list-style-type: none"> <li>1. Define the following:               <ol style="list-style-type: none"> <li>a. resources</li> <li>b. management</li> <li>c. sustainability</li> </ol> </li> <li>2. Define the following:               <ol style="list-style-type: none"> <li>a. intraoral tasks</li> <li>b. direct supervision</li> <li>c. indirect supervision</li> </ol> </li> <li>3. List specific examples of effective management of the following resources in dental assisting:               <ol style="list-style-type: none"> <li>a. time</li> <li>b. materials</li> <li>c. personnel</li> </ol> </li> <li>4. Define the following:               <ol style="list-style-type: none"> <li>a. profitability</li> <li>b. sustainability</li> <li>c. company growth</li> </ol> </li> <li>5. Describe the economic benefits and liabilities of managing resources in an environmentally responsible way.</li> </ol>	<p><b>Career Ready Practice:</b> 2</p> <p><b>CTE Anchor:</b> Career Planning and Management: 3.2 Responsibility and Flexibility: 7.2, 7.3, 7.4</p> <p><b>CTE Pathway:</b> B1.5, B12.1</p>
<p>E. PATIENT HISTORY</p> <p>Understand the policies and procedures used to obtain a patient's medical and dental history.</p>	<ol style="list-style-type: none"> <li>1. Define the following:               <ol style="list-style-type: none"> <li>a. anamnesis (a.k.a. medical history)</li> <li>b. chronic illness</li> <li>c. acute illness</li> <li>d. symptoms</li> <li>e. clinical signs</li> </ol> </li> </ol>	<p><b>Career Ready Practice:</b> 1, 2, 4, 5, 6, 7, 10, 12</p> <p><b>CTE Anchor:</b> Academics: 1.0</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(5 hours)	<ul style="list-style-type: none"> <li>f. diagnosis</li> <li>g. treatment</li> <li>h. care</li> <li>i. prescription medication</li> <li>j. non-prescription medication (a.k.a. over the counter medication)</li> <li>k. controlled medications</li> </ul> <p>2. Describe the importance of accurate collection of the following data found in an anamnesis:</p> <ul style="list-style-type: none"> <li>a. identification and demographics: name, age, height, and weight</li> <li>b. chief complaint (CC) – major health problem or concern and its time course</li> <li>c. history of present illness (HPI)</li> <li>d. past medical history (PMH)</li> <li>e. review of systems (ROS) – systematic questioning about different organ systems</li> <li>f. family disease</li> <li>g. childhood diseases</li> <li>h. medication</li> <li>i. allergies</li> <li>j. social history</li> <li>k. sexual history</li> </ul> <p>3. Describe the effects of the following chronic illness/disorders on dental care:</p> <ul style="list-style-type: none"> <li>a. heart disease</li> <li>b. emphysema</li> <li>c. hemorrhagic tendency</li> <li>d. antibiotic sensitivity</li> </ul> <p>4. Describe and demonstrate the following:</p> <ul style="list-style-type: none"> <li>a. determining important medical issues relating to dental care</li> <li>b. common medication that could affect dental procedures</li> <li>c. obtaining the health history of three dental patients</li> <li>d. adherence to the HIPAA requirements</li> </ul>	<p>Communications: 2.4, 2.5, 2.7, 2.8</p> <p>Problem Solving and Critical Thinking: 5.1, 5.2, 5.4, 5.6</p> <p>Health and Safety: 6.6</p> <p>Responsibility and Flexibility: 7.7</p> <p>Ethics and Legal Responsibilities: 8.3</p> <p>Technical Knowledge and Skills: 10.1, 10.2</p> <p>Demonstration and Application: 11.1</p> <p><b>CTE Pathway:</b> B2.1, B2.3, B4.1, B4.2, B4.3, B4.4, B4.5, B5.1, B5.4, B6.6, B10.2, B10.4, B10.5, B12.1, B12.2, B12.3</p>
<p>F. VITAL SIGNS</p> <p>Understand the principles and procedures used to obtain vital signs.</p>	<p>1. Define the following:</p> <ul style="list-style-type: none"> <li>a. vital signs</li> <li>b. body temperature</li> <li>c. pulse rate or heart rate</li> <li>d. respiratory rate</li> <li>e. blood pressure <ul style="list-style-type: none"> <li>i. diastolic blood pressure</li> <li>ii. systolic blood pressure</li> </ul> </li> </ul> <p>2. Identify and discuss the proper use, maintenance, and storage of the following equipment:</p> <ul style="list-style-type: none"> <li>a. thermometer</li> <li>b. sphygmomanometer</li> <li>c. watch</li> </ul>	<p><b>Career Ready Practice:</b> 1, 2, 4, 5, 7, 10, 12</p> <p><b>CTE Anchor:</b> Academics: 1.0</p> <p>Problem Solving and Critical Thinking: 5.4</p> <p>Technical Knowledge and Skills: 10.1, 10.2</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(5 hours)	3. Describe and demonstrate measuring the following vital signs of three dental patients: <ol style="list-style-type: none"> <li>body temperature</li> <li>pulse rate or heart rate</li> <li>respiratory rate</li> <li>blood pressure</li> </ol>	Demonstration and Application: 11.1  <b>CTE Pathway:</b> B4.4, B7.1, B7.3, B12.1, B12.3
<b>G. DENTAL CHART</b>  Understand the principles and procedures used to complete a dental chart.	<ol style="list-style-type: none"> <li>Identify each tooth by name and number on a dental chart.</li> <li>Describe the characteristics of the following surfaces:               <ol style="list-style-type: none"> <li>mesial</li> <li>distal</li> <li>occlusal</li> <li>lingual</li> <li>facial</li> </ol> </li> <li>Chart the tooth names and surfaces of three dental patients using red and blue pencils.</li> </ol>	<b>Career Ready Practice:</b> 1, 2, 4, 5, 7, 10, 12  <b>CTE Anchor:</b> Academics: 1.0 Communications: 2.4 Problem Solving and Critical Thinking: 5.6 Technical Knowledge and Skills: 10.1, 10.2  <b>CTE Pathway:</b> B2.1, B3.2, B5.4, B7.3, B12.1, B12.3
<b>H. CHAIRSIDE PROCEDURES</b>  Understand and apply the instruments, materials, and chairside procedures in a dental setting.	<ol style="list-style-type: none"> <li>Identify and describe the following:               <ol style="list-style-type: none"> <li>advantage and disadvantage of pre-set instrument trays</li> <li>types and uses of hand instruments</li> <li>function of color coding dental instruments</li> <li>tray set-up of instruments for a routine examination</li> <li>intraoral areas that should be examined during a routine dental examination</li> <li>rationale for a routine examination and for a prophylaxis</li> <li>rationale for conducting an extra-oral examination</li> <li>rationale for including the radiograph procedure as part of the initial examination</li> <li>rationale for making study models during the initial examination</li> </ol> </li> <li>Identify and describe the following:               <ol style="list-style-type: none"> <li>categories of instrument exchange techniques</li> <li>exchange zone and motions of the dental assistant's hands for each instrument exchange technique</li> <li>attachments for the conventional hand piece and the purpose of each</li> </ol> </li> </ol>	<b>Career Ready Practice:</b> 1, 2, 4, 5, 7, 10, 12  <b>CTE Anchors:</b> Health and Safety: 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8 Responsibility and Flexibility: 7.7 Ethics and Legal Responsibilities: 8.3 Technical Knowledge and Skills: 10.1, 10.2 Demonstration and Application: 11.1

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
	<ul style="list-style-type: none"> <li>d. rationale and techniques for using the evacuator</li> <li>e. appropriate hand that should hold the air/water syringe and/or the evacuator during operative dentistry</li> <li>f. rationale and techniques for grasping the oral excavator</li> <li>g. rationale and techniques for using the different parts of a typical hand cutting instrument</li> <li>h. rationale and techniques for selecting certain types dental forceps according to the type of teeth extracted</li> <li>i. differences in appearance and use of a broach, reamer, and file in endodontic procedures</li> <li>j. boundaries of the transfer zones for hand cutting instruments and for palm grasp instruments</li> <li>k. examples and functions of palm grasp, pen grasp, and palm-thumb grasp instruments</li> </ul> <p>3. Describe and demonstrate the following four-handed dentistry procedures:</p> <ul style="list-style-type: none"> <li>a. proper position of the dentist's legs and feet and the dental assistant's legs and feet in relation to the chair during operative dentistry</li> <li>b. proper location of the dentist and the dental assistant during local anesthesia and operative dentistry in terms of clock position</li> <li>c. appropriate height for the dental assistant's stool and the mobile cart</li> <li>d. proper position of a dental assistant in a dental stool</li> <li>e. proper procedure for positioning the operating light</li> <li>f. indicating on a dental chart a patient's dental work (i.e. existing restorations and caries) from a previous chart and oral or written description using the correct colors and symbols</li> <li>g. cleaning, lubricating, and sterilizing the conventional hand piece and its attachment</li> </ul> <p>4. Describe and demonstrate the following techniques used for a prophylaxis examination:</p> <ul style="list-style-type: none"> <li>a. setting-up a tray of appropriate instruments and items</li> <li>b. using the Cavitron and the scaler for dental calculus removal</li> <li>c. applying fluoride to the teeth</li> <li>d. conducting a pulp test</li> <li>e. testing tooth pulp vitality</li> </ul> <p>5. Describe and demonstrate the following techniques used for anesthetic administration:</p> <ul style="list-style-type: none"> <li>a. setting-up a tray of appropriate instruments and items</li> <li>b. assembling various types of anesthetic syringes</li> <li>c. selecting an aspirating or a non-aspirating syringe</li> <li>d. selecting a carpule for a appropriate syringe</li> <li>e. checking the hypodermic needle numbering and diameter</li> <li>f. selecting disposable needles if needed</li> <li>g. evaluating a dental carpule for safety and appropriate use</li> <li>h. preparing the carpule for injection by disinfecting and bringing the carpule to proper temperature</li> </ul>	<p><b>CTE Pathway:</b>  B8.4, B8.5, B9.1, B9.3,  B11.4, B12.1, B12.2,  B12.4</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(110 hours)	<ul style="list-style-type: none"> <li>i. maintaining the sterility of carpule, needle, and syringe</li> <li>j. passing the anesthetic syringe to the dentist</li> <li>k. retrieving contaminated anesthetic syringe</li> <li>l. disposing contaminated needles</li> </ul> <p>6. Describe and demonstrate the following techniques used for rubber damming during a dental procedure:</p> <ul style="list-style-type: none"> <li>a. setting-up a tray of appropriate instruments and items</li> <li>b. preparing, placing, and removing a rubber dam</li> </ul> <p>7. Describe and demonstrate the following techniques used for dental cavity preparation:</p> <ul style="list-style-type: none"> <li>a. setting-up a tray of appropriate instruments and items</li> <li>b. selecting varnish, cement base, zinc oxide-eugenol, or calcium hydroxide for cavity preparation</li> </ul> <p>8. Describe and demonstrate the following techniques for orthodontic procedures:</p> <ul style="list-style-type: none"> <li>a. setting-up a tray for the procedure</li> <li>b. preparing fixed and removable orthodontic appliances</li> <li>c. maintaining each type of appliance</li> </ul> <p>9. Describe and demonstrate the techniques used for endodontic procedures:</p> <ul style="list-style-type: none"> <li>a. setting-up a tray of appropriate instruments and items</li> <li>b. rationale for conducting a pulp test</li> <li>c. testing tooth pulp vitality</li> </ul> <p>10. Describe and demonstrate the setting-up of a tray of appropriate instruments and items for scaling and curettage, gingivectomy, bone, occlusal equilibration, for periodontal procedures.</p> <p>11. Describe and demonstrate the following techniques for oral surgery procedures:</p> <ul style="list-style-type: none"> <li>a. setting-up a tray of appropriate instruments and items for a biopsy, simple extraction, or an impaction</li> <li>b. explaining and handing postoperative instructions to patients after undergoing surgery</li> </ul> <p>12. Describe and demonstrate the following techniques for prosthodontic procedures:</p> <ul style="list-style-type: none"> <li>a. setting-up a tray of appropriate instruments and items including stainless steel crown, pit and fissure sealant, amalgam, and composite</li> <li>b. selecting direct filling resin, composite resin, restorative cements, amalgam, pin amalgam, amalgam polishing, gold inlay, gold foil</li> <li>c. constructing an immediate denture</li> <li>d. constructing a typical denture</li> <li>e. relining a denture</li> </ul> <p>13. Describe and demonstrate the following:</p> <ul style="list-style-type: none"> <li>a. creating the environment for pediatric patients</li> <li>b. setting-up a tray of appropriate instruments and items</li> </ul>	

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
<p>I. DENTAL EMERGENCY PROCEDURES</p> <p>Understand, apply, and evaluate dental emergency procedures.</p>	<ol style="list-style-type: none"> <li>1. Define and demonstrate how the following procedures can help prevent medical emergencies:               <ol style="list-style-type: none"> <li>a. reviewing and updating patient’s health history</li> <li>b. measuring and recording vital signs</li> <li>c. evaluating patient appearance and behavior</li> <li>d. monitoring patient</li> <li>e. alerting dentist to deviations from normal</li> </ol> </li> <li>2. Identify and describe the importance and function of the following basic supplies needed on the emergency cart:               <ol style="list-style-type: none"> <li>a. positive pressure oxygen</li> <li>b. full facemask</li> <li>c. blood pressure cuff</li> <li>d. stethoscope</li> <li>e. aromatic spirits of ammonia</li> <li>f. intravenous (IV) set-up with needle and tubing</li> <li>g. 500cc bag of 5% dextrose and water for IV infusion</li> <li>h. assorted sizes of oropharyngeal airways</li> <li>i. portable suction machine</li> <li>j. stop watch</li> <li>k. pen and form</li> <li>l. assorted sizes of syringes and needles</li> <li>m. alcohol swabs</li> <li>n. tourniquet</li> <li>o. Scotch tape</li> <li>p. appropriate drugs</li> </ol> </li> <li>3. Describe the importance of routine checking and updating of emergency supplies.</li> <li>4. Describe the treatment for the following emergencies:               <ol style="list-style-type: none"> <li>a. syncope</li> <li>b. shock (anaphylactic, neurogenic, circulatory)</li> <li>c. cardiac arrest</li> <li>d. hyperventilation</li> <li>e. insulin shock</li> <li>f. epileptic seizure</li> <li>g. angina pectoris</li> <li>h. heart attack</li> <li>i. stroke</li> <li>j. hemorrhage</li> <li>k. convulsion</li> <li>l. eye injury</li> <li>m. fracture</li> <li>n. poisoning</li> </ol> </li> <li>5. Describe the signs and symptoms, physiology, prevention and treatment of vasodepressor syncope.</li> <li>6. Review the oral manifestations and the medications used for the following disease/disorder:               <ol style="list-style-type: none"> <li>a. diabetes</li> <li>b. pernicious anemia</li> <li>c. syphilis</li> </ol> </li> </ol>	<p><b>Career Ready Practice:</b> 1, 2, 4, 5, 6, 7, 10, 12</p> <p><b>CTE Anchors:</b> Problem Solving and Critical Thinking: 5.2 Health and Safety: 6.3, 6.5, 6.6, 6.8 Ethics and Legal Responsibilities: 8.3 Technical Knowledge and Skills: 10.1, 10.2</p> <p><b>CTE Pathway:</b> B7.1, B7.2, B8.4, B9.1, B10.2, B10.3, B10.4, B10.5, B10.6, B10.7, B11.4, B12.1, B12.3</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(25 hours)	<ul style="list-style-type: none"> <li>d. vitamin deficiencies</li> <li>e. epilepsy</li> <li>f. gingivitis</li> <li>g. aphthous ulcers</li> <li>h. herpes</li> <li>i. periodontitis</li> <li>j. Hutchinson’s teeth</li> <li>k. thrush</li> <li>l. glossitis</li> <li>m. cheilosis</li> <li>n. pellegra</li> <li>o. Vincent’s angina</li> <li>p. pericoronitis</li> <li>q. leukoplakia</li> <li>r. periapical abscess</li> <li>s. periodontal abscess</li> <li>t. cellulitis</li> <li>u. black hairy tongue</li> <li>v. geographic tongue</li> </ul> <p>7. Describe and demonstrate aftercare of emergency equipment and the proper disposal of used/soiled supplies.</p>	
<p>J. EMPLOYABILITY SKILLS</p> <p>Understand, apply, and evaluate the employability skills required in dental assisting.</p>	<ul style="list-style-type: none"> <li>1. Describe employer requirements for the following: <ul style="list-style-type: none"> <li>a. punctuality</li> <li>b. attendance</li> <li>c. attitude toward work</li> <li>d. quality of work</li> <li>e. teamwork</li> <li>f. timeliness</li> <li>g. communication skills</li> </ul> </li> <li>2. Identify potential employers through traditional and internet sources.</li> <li>3. Describe the role of electronic social networking in job search.</li> <li>4. Design sample résumés.</li> <li>5. Describe the importance of filling out a job application legibly, with accurate and complete information.</li> <li>6. Complete sample job application forms correctly.</li> <li>7. Describe the importance of enthusiasm on a job.</li> <li>8. Describe the importance of appropriate appearance on a job.</li> <li>9. Describe the importance of the continuous upgrading of job skills.</li> <li>10. Describe customer service as a method of building permanent relationships between the organization and the dental patient.</li> <li>11. Describe and demonstrate appropriate interviewing techniques.</li> <li>12. Identify the informational materials and resources needed to be successful in an interview.</li> </ul>	<p><b>Career Ready Practice:</b> 1, 2, 3, 4, 5, 7, 8, 10</p> <p><b>CTE Anchors:</b> Career Planning and Management: 3.3, 3.8, 3.9 Technology: 4.1 Responsibility and Flexibility: 7.2, 7.4, 7.7 Ethics and Legal Responsibilities: 8.3, 8.4 Leadership and Teamwork: 9.1, 9.2, 9.3 Technical Knowledge and Skills: 10.3 Demonstration and Application: 11.1</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(10 hours)	13. Describe and demonstrate appropriate follow-up procedures.	<b>CTE Pathway:</b> B6.3, B12.1, B12.2, B12.4

## ***SUGGESTED INSTRUCTIONAL MATERIALS and OTHER RESOURCES***

### **TEXTBOOKS**

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

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

Dofka, Charline M. Dental Terminology, 2<sup>nd</sup> Edition. Cengage Learning, 2007.

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

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

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

Saunders. Dental Anatomy Coloring Book, 1<sup>st</sup> 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 – Dental Mathematics – Pass all assignments and exams on dental mathematics with a minimum score of 80% or higher.

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

SECTION D – Resource Management – Pass all assignments and exams on resource management with a minimum score of 80% or higher.

SECTION E – Patient History – Pass all assignments and exams on patient history with a minimum score of 80% or higher.

SECTION F – Vital Signs – Pass all assignments and exams on vital signs with a minimum score of 80% or higher.

SECTION G – Dental Chart – Pass all assignments and exams on head and neck anatomy with a minimum score of 80% or higher.

SECTION H – Chairside Procedures – Pass all assignments and exams on chairside procedures with a minimum score of 80% or higher.

SECTION I – Dental Emergency Procedures – Pass all assignments and exams on dental emergency procedures with a minimum score of 80% or higher.

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

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### Statement for Civil Rights

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

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