

Course Outline

Health Science and Medical Technology

REVISED: August/2017

Job Title:
Dental Assistant

76-35-53

Career Pathway:
Patient Care

Dental Assisting/1

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 first in a sequence of three designed for dental assisting. It provides students with project-based experiences in dental science and chairside assisting. Technical instruction includes an orientation, workplace safety policies and procedures, and communication skills. Emphasis is placed on the areas of dental specialization, organization of the dental health team, legal/ethical/compliance issues, head and neck anatomy, dental nomenclature, dental anatomy, dental pathology, microbiology and dental infection control, pharmacology, anesthesiology, and the impact of nutrition on dental health. It also covers the materials, equipment, and procedures used in a dental laboratory. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standard.

CBEDS Title:
Dental Services

Prerequisites:

Enrollment requires at least 18 years of age or older upon course sequence completion, a high school diploma or equivalency certificate, a 10.0 reading level as measured by the TABE D 9/10 and a 10.0 math skill level equivalent to a Math 3 (53-03-57); an AHA or BLS Health Care Providers Cardiopulmonary Resuscitation (CPR) Certification, tuberculosis and Hepatitis B screening, and evidence of good health.

NOTE: For Perkins purposes this course has been designated as an **introductory** course.

THE STUDENT MUST PRESENT A CURRENT CERTIFICATE SHOWING COMPLETION OF AN AHA OR BLS FOR HEALTHCARE PROVIDERS CARDIOPULMONARY RESUSCITATION (CPR) CLASS (COURSE C-BASIC LIFE SUPPORT) **PRIOR TO CLINICAL ROTATION.**

Los Angeles Unified School District
Division of Adult and Career Education
Instructional and Counseling Services Unit
Adult Curriculum Office



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

pp. 7-18

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

p. 20

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. 7-18

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. 20-21

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

ANA MARTINEZ
Specialist
Career Technical Education

ROSARIO GALVAN
Administrator
Division of Adult and Career Education

APPROVED:

JOE STARK
Executive Director
Division of Adult and Career Education

**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/1 Course

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
<p>A. ORIENTATION AND SAFETY</p> <p>Understand, 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. Describe the scope and purpose of the course. 2. Describe the overall course content as a part of the Linked Learning Initiative. 3. Describe classroom, office, and laboratory policies and procedures. 4. Describe the different occupations in the Health Science and Medical Technology Industry Sector which have an impact on the role of dental assistants. 5. Describe the opportunities available for promoting gender equity and the representation of non-traditional populations in the dental assisting field. 6. Describe 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. Describe 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. Describe the purpose of the California Occupational Safety and Health Administration (Cal/OSHA) and its laws governing dental assistants. 9. Describe the impact of Environmental Protection Agency (EPA) legislation on the Health Science and Medical Terminology Industry Sector practices. 10. Describe and demonstrate the procedures for contacting proper authorities for the removal of hazardous materials based on the EPA standards. 11. Describe classroom and workplace first aid and emergency procedures according to American Red Cross (ARC) standards. 12. Describe 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 	<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
(5 hours)	<ul style="list-style-type: none"> f. donning and removing clean gloves g. provision of eye wash station 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 <p>13. Pass the safety test with 100% accuracy.</p>	
<p>B. COMMUNICATION SKILLS</p> <p>Understand and apply communication techniques required in dental offices.</p> <p>(5 hours)</p>	<ul style="list-style-type: none"> 1. Define communication. 2. Describe the following stages of the communication process: <ul style="list-style-type: none"> a. sending/source <ul style="list-style-type: none"> i. reason for sending the message ii. content of the message b. message c. encoding <ul style="list-style-type: none"> i. avoid cultural issues ii. eliminate mistaken assumptions iii. fill in missing information d. channel <ul style="list-style-type: none"> i. face-to-face meetings ii. telephone and videoconferencing iii. written channels including letters, emails, memos and reports e. decoding - the time to read a message carefully or listen actively to it f. receiving g. feedback - verbal and nonverbal reactions to the communicated message h. context <ul style="list-style-type: none"> i. surrounding environment ii. broader culture (corporate culture, international cultures, etc.) 3. Describe and demonstrate the following techniques to remove barriers in communication: <ul style="list-style-type: none"> a. using clear verbal and body language to avoid confusion b. being mindful of the demands on other people's time c. conversing and delivering the message to people of different backgrounds and cultures 4. Demonstrate the following: <ul style="list-style-type: none"> a. medical history interview, using positive communication techniques b. patient greetings c. effective communication with peers and patients 	<p>Career Ready Practice: 1, 2, 9</p> <p>CTE Anchor: Communications: 2.1, 2.2, 2.3, 2.4, 2.5, 2.6</p> <p>CTE Pathway: B4.1, B4.4, B4.5, B5.1, B5.4, B6.2, B6.3, B6.4, B12.1, B12.2</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
<p>C. DENTAL SPECIALIZATIONS</p> <p>Understand the different types of dental specializations.</p> <p>(3 hours)</p>	<ol style="list-style-type: none"> 1. Define the following dental specializations and the educational requirements for each: <ol style="list-style-type: none"> a. orthodontics b. endodontics c. periodontics d. oral surgery e. prosthodontics f. pediatric dentistry g. public health 2. Describe the role of the dental assistant in each specialized area of dentistry. 3. Describe the career path that a dental assistant can follow to progress to a particular specialization. 	<p>Career Ready Practice: 1, 2, 3</p> <p>CTE Anchor: Career Planning and Management: 3.4 Responsibility and Flexibility: 7.3 Technical Knowledge and Skills: 10.1</p> <p>CTE Pathway: B12.1, B12.2</p>
<p>D. DENTAL HEALTH TEAM</p> <p>Understand the roles of the members of the dental health team.</p> <p>(2 hours)</p>	<ol style="list-style-type: none"> 1. Identify and describe the following: <ol style="list-style-type: none"> a. hospital or acute care practice setting b. members of the dental health team c. role of each member of the dental health team d. educational requirements for each member of the dental health team e. licensure/certification requirements for each member dental health team f. dental organizations and membership requirements for each g. credentialing requirements 2. Define the following: <ol style="list-style-type: none"> a. intraoral tasks b. direct supervision c. indirect supervision 	<p>Career Ready Practice: 1, 2, 3</p> <p>CTE Anchor: Career Planning and Management: 3.4 Responsibility and Flexibility: 7.3 Technical Knowledge and Skills: 10.1</p> <p>CTE Pathway: B12.1, B12.2</p>
<p>E. LEGAL AND ETHICAL ISSUES</p> <p>Understand the legal and ethical guidelines in dental practice.</p>	<ol style="list-style-type: none"> 1. Define and describe the following as they apply to dental practice: <ol style="list-style-type: none"> a. legal b. ethical c. moral d. due care e. implied consent f. informed consent g. expanded function h. confidentiality i. subpoenas 	<p>Career Ready Practice: 2, 7, 8</p> <p>CTE Anchor: Responsibility and Flexibility: 7.2</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(5 hours)	<ul style="list-style-type: none"> j. statute of limitations k. malpractice l. tort m. civil law n. criminal law o. malpractice insurance <p>2. Identify and describe the purposes and provisions of the following:</p> <ul style="list-style-type: none"> a. American Dental Association (ADA) Code of Ethics b. State Dental Practice Act c. Health Insurance Portability and Accountability Act (HIPAA) of 1996 <p>3. Describe the importance of maintaining accurate patient records in the dental facility.</p>	<p>Ethics and Legal Responsibilities: 8.2, 8.4</p> <p>CTE Pathway: B6.6, B12.2</p>
<p>F. COMPLIANCE ISSUES</p> <p>Understand and evaluate the policies and procedures used to avoid fraud and abuse of laws and regulations in a day-to-day dental setting.</p> <p>(5 hours)</p>	<p>1. Define the following:</p> <ul style="list-style-type: none"> a. dental care claim b. compliance c. medical necessity d. coding e. bundling f. fraud g. abuse <p>2. Identify and describe the following:</p> <ul style="list-style-type: none"> a. essential elements of a dental claim compliance program b. government anti-fraud and abuse initiatives c. penalties for government fraud and abuse d. preventive measures against fraud and abuse e. role of federal, state, and private dental health carriers and agencies in assuring compliance <p>3. Describe the economic impact of fraudulent dental practices on the society.</p> <p>4. Analyze three cases that show:</p> <ul style="list-style-type: none"> a. evidence of false, fraudulent, and fictitious claims b. application of corrective actions 	<p>Career Ready Practice: 2, 7, 8, 12</p> <p>CTE Anchor: Problem Solving and Critical Thinking: 5.2, 5.3, 5.4, 5.6 Responsibility and Flexibility: 7.2 Ethics and Legal Responsibilities: 8.1, 8.2, 8.3, 8.4, 8.5, 8.7</p> <p>CTE Pathway: B12.1, B12.2, B12.3, B13.5</p>
<p>G. HEAD AND NECK ANATOMY</p> <p>Understand the structure of the head and neck.</p>	<p>1. Identify, locate, spell, and describe the following:</p> <ul style="list-style-type: none"> a. bones of the skull b. bones of the face c. bones of the neck d. muscles of mastication e. cranial and facial nerves f. cranial and facial blood vessels g. paranasal sinuses h. landmarks of the palate and mandible i. head and neck malformations <p>2. Describe the relationship between the muscles of mastication and the supporting structures of the human dentition.</p>	<p>Career Ready Practice: 1, 2</p> <p>CTE Anchor: Academics: 1.0 Communications: 2.7, 2.8 Technical Knowledge and Skills: 10.1, 10.3</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(15 hours)	3. Describe the function of the lymphatic system and its relation to dental physiology. 4. Diagram the head and neck and label the salivary glands.	CTE Pathway: B2.1, B3.2, B12.3
H. DENTAL NOMENCLATURE Understand dental terminology and abbreviations.	1. Define the following prefixes and suffixes: a. hypo b. endo c. mast d. pyo e. odont f. micro g. hyper h. meso i. itis j. emia k. peri l. macro m. supra n. dys o. oma p. cervix q. pedo r. a s. an t. plasia u. osteo v. anti w. poly x. osis y. myelo z. bi aa. sub bb. derm cc. dia dd. rrhea ee. myo ff. e gg. super 2. Define, spell, and pronounce the following terms: a. neoplasm b. benign c. malignant d. papilloma e. squamous cell carcinoma f. exfoliative cytology g. necrosis h. chancre i. anodontia j. macrodontia	Career Ready Practice: 1, 2 CTE Anchor: Academics: 1.0 Communications: 2.7 Technical Knowledge and Skills: 10.1 CTE Pathway: B2.1, B5.2, B5.4, B5.5, B5.6

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(20 hours)	<ul style="list-style-type: none"> k. microdontia l. adenocarcinoma m. ankylosis n. sessile o. leukemia p. pedunculated q. hemorrhagic r. idiopathic s. vesicle t. febrile u. fusion v. edematous w. subclinical x. metastasis y. sclerosing solutions z. circumscribed aa. macular bb. herpes cc. desquamative dd. aphthous ulcer ee. hematoma ff. asymptomatic gg. sequestra hh. purulent ii. pseudo jj. fibromatosis kk. abrasion ll. attrition <p>3. Abbreviate dental terms.</p>	
<p>I. DENTAL ANATOMY</p> <p>Understand the structure of the teeth and their supporting tissues.</p>	<ul style="list-style-type: none"> 1. Define the following: <ul style="list-style-type: none"> a. primary teeth b. permanent teeth c. arch d. eruption dates e. landmark f. parts of a tooth: <ul style="list-style-type: none"> i. enamel ii. dentin iii. cementum iv. pulp g. occlusion h. malocclusion i. mastication 2. Identify and describe the following: <ul style="list-style-type: none"> a. number of roots found in each tooth b. location and function of the enamel, dentin, cementum, and pulp of a tooth 	<p>Career Ready Practice: 1, 2</p> <p>CTE Anchor: Academics: 1.0 Communications: 2.7, 2.8 Technical Knowledge and Skills: 10.1, 10.3</p> <p>CTE Pathway: B2.1, B3.2, B12.3, B12.4</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(15 hours)	<ul style="list-style-type: none"> c. anatomy and physiology of the dental arch, and temporomandibular joint d. name and number position in the arch of each of the primary teeth e. name and number position in the arch of each of the permanent teeth f. surfaces, landmarks, and eruption dates of primary teeth g. surfaces, landmarks, and eruption dates of permanent teeth h. contact points of teeth i. general types of occlusion j. general types of malocclusion k. three tissues that surround and support a tooth l. types of connective tissue that comprise the periodontal ligament m. gingival tissue n. healthy and infected tissue <p>3. Diagram and label the parts of each tooth.</p>	
<p>J. DENTAL PATHOLOGY</p> <p>Understand the oral manifestations of diseases and nutritional/ developmental disorders.</p>	<ul style="list-style-type: none"> 1. Define the following: <ul style="list-style-type: none"> a. oral pathology b. oral cavity c. etiology d. dental caries e. dental plaque f. periodontal diseases g. hypoplasia h. Hutchinson’s incisors i. mottled enamel j. anadontia k. cleft lip and palate l. pulpotomy m. pulpectomy 2. Identify the following: <ul style="list-style-type: none"> a. etiology of dental caries b. methods of controlling dental caries c. inflammation of the oral tissues d. examples and causes of periodontal diseases e. scaling, curettage, and gingivectomy 3. Describe the following: <ul style="list-style-type: none"> a. relationship between systemic disease and dental disease b. characteristics of developmental diseases of the enamel c. warning signs of cancer d. preventive measures against oral cancer 4. Identify and describe the oral manifestations of the following diseases/disorders: <ul style="list-style-type: none"> a. diabetes b. pernicious anemia c. syphilis d. vitamin deficiencies 	<p>Career Ready Practice: 1, 2</p> <p>CTE Anchor: Academics: 1.0 Communications: 2.7, 2.8 Technical Knowledge and Skills: 10.1</p> <p>CTE Pathway: B1.4, B2.1, B2.3, B2.4</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(10 hours)	<ul style="list-style-type: none"> e. epilepsy f. gingivitis g. aphthous ulcers h. herpes i. periodontitis j. Hutchinson’s teeth k. thrush l. glossitis m. cheilosis n. pellegra o. Vincent’s angina p. pericoronitis q. leukoplakia r. periapical abscess s. periodontal abscess t. cellulitis u. black hairy tongue v. geographic tongue 	
<p>K. MICROBIOLOGY AND DENTAL INFECTION CONTROL</p> <p>Understand and apply the preventive measures used in oral disease and infection control.</p>	<ol style="list-style-type: none"> 1. Define the following: <ul style="list-style-type: none"> a. microbiology b. microorganisms c. pathogenic d. non-pathogenic e. hepatitis f. acquired immunodeficiency syndrome (AIDS) g. aerobic bacteria h. anaerobic bacteria i. disinfection j. sterilization k. disinfectants l. sterilants m. personal protective equipment (PPE) 2. Identify and describe the following: <ul style="list-style-type: none"> a. major classifications of microorganisms b. cause, symptoms, and treatment for hepatitis and AIDS c. direct, indirect, droplet, and carrier mechanisms for the transmission of disease d. characteristics of aerobic bacteria e. characteristics of anaerobic bacteria f. natural barriers of the body against bacteria g. purpose of personal protective equipment (PPE), surgical mask, face shield, eye glasses, and gloves h. protective devices used by the dental assistant while preparing instruments i. items that are disposable and cannot be sterilized j. operations that requires disinfecting prior to seating each patient 	<p>Career Ready Practice: 1, 2, 5, 6, 7, 12</p> <p>CTE Anchor: Problem Solving and Critical Thinking: 5.2 Health and Safety: 6.1, 6.2, 6.3, 6.4, 6.6, 6.8 Technical Knowledge and Skills: 10.1, 10.2 Demonstration and Application: 11.1</p> <p>CTE Pathway: B9.1, B9.3, B9.6, B10.1, B10.2, B10.3, B10.4, B10.5, B10.6, B11.1, B11.2, B11.3, B11.4, B12.1, B12.3, B12.4</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(15 hours)	<ul style="list-style-type: none"> k. classification of chemical disinfectants and sterilants l. components of an effective sterilization center m. classifications of medical waste <p>3. Describe and demonstrate the following:</p> <ul style="list-style-type: none"> a. donning techniques for personal protective equipment (PPE), surgical mask, face shield, eye glasses, and gloves b. pre-cleaning techniques for instruments c. techniques for reducing the bacterial count in a patient's mouth prior to beginning the dental procedure d. disinfection methods e. sterilization methods of autoclave, dryclave, chemiclave, ethylene oxide, and glutaraldehydes f. disposal techniques for contaminated dental items g. handling and disposal techniques for sharp containers h. handling and disposal techniques for dental office waste 	
<p>L. PHARMACOLOGY</p> <p>Understand common drugs and the laws that control their use.</p>	<ul style="list-style-type: none"> 1. Define the following: <ul style="list-style-type: none"> a. pharmacology b. analgesic 2. Identify and describe the purposes of the following: <ul style="list-style-type: none"> a. Comprehensive Drug Abuse Prevention and Control Act b. Council on Dental Therapeutics c. Physicians' Desk Reference (PDR) 3. Describe the following: <ul style="list-style-type: none"> a. organization of the Physicians' Desk Reference (PDR) b. parts of a prescription <ul style="list-style-type: none"> i. heading ii. Rx or superscription iii. Inscription iv. Subscription v. signature c. matching abbreviations with definitions, given a common Latin abbreviation used on prescriptions d. methods of administering drugs and cite an example of each e. advantage and disadvantage of each route of drug administration f. basic "safe" policy for storage of dental medications g. impact of the following on medications: <ul style="list-style-type: none"> i. air ii. temperature changes iii. exposure to light h. characteristics of analgesics: <ul style="list-style-type: none"> i. mild analgesic ii. moderate analgesic iii. strong analgesic i. types of commonly used drugs based on categories of diseases: <ul style="list-style-type: none"> i. cardiovascular ii. pulmonary 	<p>Career Ready Practice: 1, 2</p> <p>CTE Anchor: Academics: 1.0 Communications: 2.7 Technical Knowledge and Skills: 10.1</p> <p>CTE Pathway: B2.1, B5.2, B5.4, B12.1</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(10 hours)	<ul style="list-style-type: none"> iii. diabetic iv. thyroid v. corticosteroids vi. allergy vii. tranquilizing viii. anticonvulsive j. importance of mathematics in pharmacology 	
<p>M. ANESTHESIOLOGY</p> <p>Understand and apply anesthetics use in dental procedures.</p>	<ul style="list-style-type: none"> 1. Define the following: <ul style="list-style-type: none"> a. anesthesia b. general anesthetics c. local/topical anesthetics d. mandibular injections e. maxillary injections 2. Identify and describe the following: <ul style="list-style-type: none"> a. reasons and methods of dispensing local anesthetics b. reasons and methods of using a blocking-type local anesthetics c. differences of levels of consciousness between general and local anesthetics d. generic and trade names of commonly used local anesthetic solutions e. general anesthetics used in dental procedures f. local anesthetics used in dental procedures g. types of needles <ul style="list-style-type: none"> i. aspirating needle ii. non-aspirating needle iii. hypodermic needle h. types of syringes <ul style="list-style-type: none"> i. air/chip syringe ii. dental syringe iii. hypodermic iv. breakaway v. side loading vi. Luer-Lok syringe i. medical problems which contraindicate the use of a local anesthetic with vasoconstrictors j. shelf life of anesthetic carpules and describe the implications of shelf life on the management of carpule supplies k. range of acceptable temperatures and time for the storage of anesthetic carpules l. rationale for using an aspirating syringe m. reasons for using disposable needles and their common lengths n. relationship between hypodermic needle numbering and diameter o. Describe the purpose of the bevel on an injection needle 	<p>Career Ready Practice: 1, 2, 4, 5, 6, 7, 10, 12</p> <p>CTE Anchor: Academics: 1.0 Communications: 2.7 Problem Solving and Critical Thinking: 5.2, 5.3, 5.4, 5.6 Health and Safety: 6.2, 6.3, 6.4, 6.6 Technical Knowledge and Skills: 10.1, 10.2 Demonstration and Application: 11.1</p> <p>CTE Pathway: B2.1, B4.3, B4.4, B5.1, B5.2, B5.4, B7.1, B7.2, B10.2, B10.4, B12.1, B12.3, B12.4</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
<p>O. DENTAL LAB MATERIALS AND PROCEDURES</p> <p>Understand and apply the materials and procedures in a dental laboratory.</p> <p>(45 hours)</p>	<ol style="list-style-type: none"> 1. Identify and describe the characteristics of the following dental lab materials: <ol style="list-style-type: none"> a. alginate material b. plaster of Paris c. zinc phosphate d. zinc oxide e. eugenol f. glass ionomer g. polycarboxalite cement h. calcium hydroxide i. polycarboxalate cement j. composite materials k. amalgam 2. Describe and demonstrate the following: <ol style="list-style-type: none"> a. preparing and manipulating alginate material b. preparing and manipulating plaster of Paris c. trimming a plaster model d. preparing mixes of zinc phosphate, zinc oxide, eugenol, glass ionomer, and polycarboxalite cement e. preparing and mixing calcium hydroxide and polycarboxalate cement f. preparing and mixing composite materials 	<p>Career Ready Practice: 1, 2, 4, 5, 6, 7, 10</p> <p>CTE Anchor: Academics: 1.0 Health and Safety: 6.6 Technical Knowledge and Skills: 10.1, 10.2 Demonstration and Application: 11.1</p> <p>CTE Pathway: B12.1, B12.3, B12.4</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 – Orientation and Safety – Pass the safety test with a score of 100%.

SECTION B – Communication Skills – Pass all assignments and exams on communication skills with a minimum score of 80% or higher.

SECTION C – Dental Specializations – Pass all assignments and exams on dental specializations with a minimum score of 80% or higher.

SECTION D – Dental Health Team – Pass all assignments and exams on dental health team with a minimum score of 80% or higher.

SECTION E – Legal and Ethical Issues – Pass all assignments and exams on legal and ethical issues with a minimum score of 80% or higher.

SECTION F – Compliance Issues – Pass all assignments and exams on compliance issues with a minimum score of 80% or higher.

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

SECTION H – Dental Nomenclature – Pass all assignments and exams on dental nomenclature with a minimum score of 80% or higher.

SECTION I – Dental Anatomy – Pass all assignments and exams on dental anatomy with a minimum score of 80% or higher.

SECTION J – Dental Pathology – Pass all assignments and exams on dental pathology with a minimum score of 80% or higher.

SECTION K– Microbiology and Dental Infection Control – Pass all assignments and exams on microbiology and dental infection control with a minimum score of 80% or higher.

SECTION L– Pharmacology – Pass all assignments and exams on pharmacology with a minimum score of 80% or higher.

SECTION M– Anesthesiology – Pass all assignments and exams on anesthesiology with a minimum score of 80% or higher.

SECTION N– Nutrition and Dental Health – Pass all assignments and exams on nutrition and dental health with a minimum score of 80% or higher.

SECTION O– Dental Lab Materials and Procedures – Pass all assignments and exams on dental lab materials and procedures 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.
