2006 Mississippi Curriculum Framework

Postsecondary Dental Assisting Technology

(Program CIP: 51.0601 – Dental Assisting/Assistant)

Direct inquiries to

John Adcock
Director for Career and Technical Education
State Board for Community and Junior Colleges
3825 Ridgewood Road
Jackson, MS 39211
(601) 432-6518
jadcock@sbcjc.cc.ms.us

Stephanie King, Ph.D.
Instructional Design Specialist
Research and Curriculum Unit
P.O. Drawer DX
Mississippi State, MS 39762
(662) 325-2510
sbk2@ra.msstate.edu

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Acknowledgments

Writing Team	Emily Addison, Pearl River Community College, Hattiesburg, MS H. Richard Gavant, Dm.D., Hinds Community College, Allied Health Center, Jackson, MS
RCU Staff	Stephanie King, Ph.D. – Instructional Design Specialist
Professional Curriculum Advisory Team	Hinds Community College Dental Assisting Advisory Committee Pearl River Community College Dental Assisting Advisory Committee Dr. Alex Touchstone, Hattiesburg, MS Dr. Brian Pitfield, Hattiesburg, MS

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Foreword

As the world economy continues to evolve, businesses and industries must adopt new practices and processes in order to survive. Quality and cost control, work teams and participatory management, and an infusion of technology are transforming the way people work and do business. Employees are now expected to read, write, and communicate effectively; think creatively, solve problems, and make decisions; and interact with each other and the technologies in the workplace. Vocational-technical programs must also adopt these practices in order to provide graduates who can enter and advance in the changing work world.

The curriculum framework in this document reflects these changes in the workplace and a number of other factors that impact on local vocational-technical programs. Federal and state legislation calls for articulation between high school and community college programs, integration of academic and vocational skills, and the development of sequential courses of study that provide students with the optimum educational path for achieving successful employment. National skills standards, developed by industry groups and sponsored by the U.S. Department of Education and Labor, provide vocational educators with the expectations of employers across the United States. All of these factors are reflected in the framework found in this document.

Each postsecondary program of instruction consists of a program description and a suggested sequence of courses which focus on the development of occupational competencies. Each vocational-technical course in this sequence has been written using a common format which includes the following components:

- Course Name – A common name that will be used by all community/junior colleges in reporting students.

- Course Abbreviation – A common abbreviation that will be used by all community/junior colleges in reporting students.

- Classification – Courses may be classified as:
    - Vocational-technical core – A required vocational-technical course for all students.
    - Area of concentration (AOC) core – A course required in an area of concentration of a cluster of programs.
    - Vocational-technical elective – An elective vocational-technical course.
    - Related academic course – An academic course which provides academic skills and knowledge directly related to the program area.
    - Academic core – An academic course which is required as part of the requirements for an Associate degree.

- Description – A short narrative which includes the major purpose(s) of the course and the recommended number of hours of lecture and laboratory activities to be conducted each week during a regular semester.

- Prerequisites – A listing of any courses that must be taken prior to or on enrollment in the course.

- Corequisites – A listing of courses that may be taken while enrolled in the course.

- Competencies and Suggested Objectives – A listing of the competencies (major concepts and performances) and of the suggested student objectives that will enable students to demonstrate mastery of these competencies.

The following guidelines were used in developing the program(s) in this document and should be considered in compiling and revising course syllabi and daily lesson plans at the local level:

- The content of the courses in this document reflects approximately 75 percent of the time allocated to each course. For example, in a four semester hour course consisting of 30 hours lecture and 120 hours of laboratory activities, approximately 22 hours of lecture and 90 hours of lab should be taken by the competencies and suggested objectives identified in the course framework. The remaining 25 percent of each course should be developed at the local district level and may reflect:
    - Additional competencies and objectives within the course related to topics not found in the State framework, including activities related to specific needs of industries in the community college district.
    - Activities which develop a higher level of mastery on the existing competencies and suggested objectives.
    - Activities and instruction related to new technologies and concepts that were not prevalent at the time the current framework was developed/revised.
    - Activities which implement components of the Mississippi Tech Prep initiative, including integration of academic and vocational-technical skills and coursework, school-to-work transition activities, and articulation of secondary and postsecondary vocational-technical programs.
    - Individualized learning activities, including worksite learning activities, to better prepare individuals in the courses for their chosen occupational area.

- Sequencing of the course within a program is left to the discretion of the local district. Naturally, foundation courses related to topics such as safety, tool and equipment usage, and other fundamental skills should be taught first. Other courses related to specific skill areas and related academics, however, may be sequenced to take advantage of seasonal and climatic conditions, resources located outside of the school, and other factors.

- Programs that offer an Associate of Applied Science degree must include a minimum 15 semester credit hour academic core. Specific courses to be taken within this core are to be determined by the local district. Minimum academic core courses are as follows:
    - 3 semester credit hours — Math/Science Elective
    - 3 semester credit hours — Written Communications Elective
    - 3 semester credit hours — Oral Communications Elective
    - 3 semester credit hours — Humanities/Fine Arts Elective
    - 3 semester credit hours — Social/Behavioral Science Elective

It is recommended that courses in the academic core be spaced out over the entire length of the program, so that students complete some academic and vocational-technical courses each semester. Each community/junior college has the discretion to select the actual courses that are required to meet this academic core requirement.

- In instances where secondary programs are directly related to community and junior college programs, competencies and suggested objectives from the high school programs are listed as Baseline Competencies. These competencies and objectives reflect skills and knowledge that are directly related to the community and junior college vocational-technical program. In adopting the curriculum framework, each community and junior college is asked to give assurances that:
    - Students who can demonstrate mastery of the Baseline Competencies do not receive duplicate instruction, and
    - Students who cannot demonstrate mastery of this content will be given the opportunity to do so.

- The roles of the Baseline Competencies are to:
    - Assist community/junior college personnel in developing articulation agreements with high schools, and
    - Ensure that all community and junior college courses provide a higher level of instruction than their secondary counterparts.

- The Baseline Competencies may be taught as special "Introduction" courses for 3-6 semester hours of institutional credit which will not count toward Associate degree requirements. Community and junior colleges may choose to integrate the Baseline Competencies into ongoing courses in lieu of offering the "Introduction" courses or may offer the competencies through special projects or individualized instruction methods.

- Technical elective courses have been included to allow community colleges and students to customize programs to meet the needs of industries and employers in their area.

In order to provide flexibility within the districts, individual courses within a framework may be customized by:

- Adding new competencies and suggested objectives.
- Revising or extending the suggested objectives for individual competencies.
- Integrating baseline competencies from associated high school programs.
- Adjusting the semester credit hours of a course to be up 1 hour or down 1 hour (after informing the State Board for Community and Junior Colleges [SBCJC] of the change).

In addition, the curriculum framework as a whole may be customized by:

- Resequencing courses within the suggested course sequence.
- Developing and adding a new course which meets specific needs of industries and other clients in the community or junior college district (with SBCJC approval).
- Utilizing the technical elective options in many of the curricula to customize programs.

Table of Contents

Program Description

The Dental Assisting Technology curriculum is a one-year program of study designed to prepare the student for employment and advancement in the dental assisting field. The curriculum requires a minimum of 46 semester hours of courses with a certificate granted upon completion of the program. CPR - Health Care Provider is a prerequisite for the program. If the student desires, an Associate of Applied Science degree may be obtained by completing additional prescribed courses.

The program includes lecture hours, lab hours, and supervised clinical experiences. In the clinical experiences, the student will assist the dentist at chairside in private offices, clinics, and state facilities, as applicable.

Upon graduation from the program, the student will automatically receive a radiology permit which is necessary for taking x-rays in a dental office. Also having successfully completed the program, the student is eligible to take the Dental Assisting National Board Certification Exam.

Industry standards are based on the *Dental Assisting National Board Certified Dental Assistant Examination Topics*.

Suggested Course Sequence I (to begin in Fall Semester)*
Dental Assisting Technology

Baseline Competencies for Dental Assisting Technology**

FIRST YEAR (CERTIFICATE)

3 sch	Oral Communications Elective	3 sch	Dental Science II (DAT 1323)
1 sch	Dental Orientation (DAT 1111)	3 sch	Chairside Assisting II (DAT 1423)
4 sch	Dental Assisting Materials (DAT 1214)	2 sch	Dental Radiology II (DAT 1522)
3 sch	Dental Science I (DAT 1313)	2 sch	Dental Health Education (DAT 1612)
5 sch	Chairside Assisting I (DAT 1415)	4 sch	Practice Management (DAT 1714)
3 sch	Dental Radiology I (DAT 1513)	5 sch	Clinical Experience I (DAT 1815)
19 sch		19 sch	

SUMMER TERM

3 sch	Written Communications Elective
2 sch	Clinical Experience II (DAT 1822)
3 sch	Chairside Assisting III (DAT 1433)
8 sch	

SECOND YEAR (TECHNICAL)

After completion of the 12-month course of study, a student will receive a certificate. If a student wishes to receive the AAS degree, the remainder of the minimum academic courses may be taken, plus additional electives. The second year should include:

3 sch	Math/Science Elective
3 sch	Social/Behavioral Science Elective
3 sch	Humanities/Fine Arts Elective
3 sch	Fundamentals of Microcomputer Applications (CPT 1113)
8 sch	Approved Electives†
20 hours	

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

** Baseline competencies are taken from the high school Allied Health program. Students who can document mastery of these competencies should not receive duplicate instruction. Students who cannot demonstrate mastery will be required to do so.

†APPROVED ELECTIVES

English Composition I (ENG 1113)
English Composition II (ENG 1123)
Oral Communications (Principles of Speech) (SPT 1113)
Anatomy and Physiology I (BIO 1514)
Anatomy and Physiology II (BIO 1524)
General Biology I (BIO 1134)
General Biology II (BIO 1144)
Microbiology (BIO 2924)
General Chemistry I (CHE 1213)
General Chemistry Laboratory I (CHE 1211)
General Chemistry II (CHE 1223)
General Chemistry Laboratory II (CHE 1221)
Principles of Chemistry I (CHE 1314)
Principles of Chemistry II (CHE 1324)
General Psychology I (PSY 1513)
General Sociology I (SOC 2113)
Nutrition (HEC 1253)
College Algebra (MAT 1313)
Trigonometry (MAT 1323)
Survey of Physics I (PHY 1214 or 2414)
Introduction to Computer Concepts (CSC 1113)
Fundamentals of Microcomputer Applications (CPT 1113)
Music Appreciation (MUS 1113)
Philosophy
History
Foreign Language
Art

Suggested Course Sequence II (to begin in Spring Semester)*
Dental Assisting Technology

Baseline Competencies for Dental Assisting Technology**

FIRST YEAR (CERTIFICATE)

SPRING TERM

3 sch Oral Communications Elective
1 sch Dental Orientation (DAT 1111)
4 sch Dental Assisting Materials (DAT 1214)
3 sch Dental Science I (DAT 1313)
5 sch Chairside Assisting I (DAT 1415)
3 sch Dental Radiology I (DAT 1513)

_____
19 sch

SUMMER TERM

3 sch Written Communications Elective
2 sch Clinical Experience II (DAT 1822)
2 sch Dental Radiology II (DAT 1522)
3 sch Chairside Assisting II (DAT 1423)

_____
10 sch

FALL TERM

3 sch Dental Science II (DAT 1323)
3 sch Chairside Assisting III (DAT 1433)
2 sch Dental Health Education (DAT 1612)
4 sch Practice Management (DAT 1714)
5 sch Clinical Experience I (DAT 1815)

_____
17 sch

SECOND YEAR (TECHNICAL)

After completion of the 12-month course of study a student will receive a certificate. If a student wishes to receive the AAS degree, the remainder of the minimum academic courses may be taken, plus additional electives. The second year should include:

3 sch	Math/Science Elective
3 sch	Social/Behavioral Science Elective
3 sch	Humanities/Fine Arts Elective
3 sch	Fundamentals of Microcomputer Applications (CPT 1113)
8 sch	Approved Electives†
20 sch	

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

** Baseline competencies are taken from the high school Allied Health program. Students who can document mastery of these competencies should not receive duplicate instruction. Students who cannot demonstrate mastery will be required to do so.

†APPROVED ELECTIVES

English Composition I (ENG 1113)
English Composition II (ENG 1123)
Oral Communications (Principles of Speech) (SPT 1113)
Anatomy and Physiology I (BIO 1514)
Anatomy and Physiology II (BIO 1524)
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General Biology II (BIO 1144)
Microbiology (BIO 2924)
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General Chemistry Laboratory I (CHE 1211)
General Chemistry II (CHE 1223)
General Chemistry Laboratory II (CHE 1221)
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Principles of Chemistry II (CHE 1324)
General Psychology I (PSY 1513)
General Sociology I (SOC 2113)
Nutrition (HEC 1253)
College Algebra (MAT 1313)
Trigonometry (MAT 1323)
Survey of Physics I (PHY 1214 or 2414)
Introduction to Computer Concepts (CSC 1113)
Fundamentals of Microcomputer Applications (CPT 1113)

Music Appreciation (MUS 1113)
Philosophy
History
Foreign Language
Art

Dental Assisting Technology Courses

Course Name: Dental Orientation

Course Abbreviation: DAT 1111

Classification: Vocational-Technical Core

Description: The development, function, status, and organization of the dental profession; and the professional, legal, and ethical responsibilities of the dental assistant. Terminology emphasizing prefixes, suffixes, roots, abbreviations, spelling, and definitions of medical and dental terms. (1 sch: 1 hr. lecture)

Corequisites: All first semester courses

Competencies and Suggested Objectives
1. Discuss the development, function, status, and organization of the dental profession. a. Identify the major historical events in dentistry and allied health occupations. b. Discuss the increased need and demand for dental care. c. Discuss the manner in which the dental needs of the population are being met. d. Explain the objectives and organizational purposes of the dental profession. e. Define the medical and dental specialties. f. Define the dental specialties and describe the role of the dental assistant in each area. g. Demonstrate knowledge of the function, organizational structure, and services of the professional organization for dentists. h. List the allied professional programs and agencies related to the dental profession. i. Identify the function, organizational structure, and services of the professional organizations for dental assistants. j. Discuss the function and organizational structure of the professional organizations for dental hygienists. k. Discuss the organizations which are available to dental lab technicians. l. Discuss the roles of the dental assistant as a member of the dental team. m. Identify the roles of other members of the dental team.
2. Discuss the educational requirements of the members of the dental profession. a. State the educational requirements for the dental assistant. b. State the educational requirements for the dentist. c. List the educational requirements for the dental hygienist. d. State the educational requirements for the dental lab technician. e. Using the Internet, identify the requirements which a candidate must meet in order to qualify for the certification exam, and explain the requirements necessary to retain current certification.
3. Explain the professional, legal, and ethical responsibilities of the dental assistant. a. Demonstrate knowledge of the rules and regulations of the dental assisting program. b. Discuss the importance of good health and grooming while working in a health team field. c. Define jurisprudence and code of ethics, and discuss ethics.

Competencies and Suggested Objectives
d. Explain the provisions in the state dental practice act, especially those pertaining to the dental auxiliary.
4. Recognize and discuss word components, terms, and abbreviations related to the dental profession. a. Utilize dental and medical terminology as related to the dental practice. b. Develop and use a professional vocabulary in speaking and writing.
5. Identify various employment opportunities in the field of dental assisting. a. List the employment opportunities available to a qualified dental assistant. b. Discuss the manner in which the dental assistant locates employment opportunities.

STANDARDS

Dental Assisting National Board Certified Dental Assistant Examination Topics

None

Related Academic Standards

R3 Recall Information (details, sequence)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

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Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T3 Technology productivity tools
T5 Technology research tools

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Anderson, P. C., & Pendleton, A. E. (2001). *The dental assistant* (7th ed.). Albany, NY: Delmar.

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Course Name: Dental Assisting Materials

Course Abbreviation: DAT 1214

Classification: Vocational-Technical Core

Description: Dental safety precautions will be emphasized. Includes a comprehensive study of the physical and chemical properties of dental materials. Lab sessions include measuring, manipulating, and preparing dental materials for use in the dental operatory and dental laboratory. (4 sch: 2 hr. lecture, 4 hr. lab)

Corequisites: All first semester courses

Competencies and Suggested Objectives
1. Relate safety requirements for handling dental materials and equipment. a. Comply with safety regulations at all times. b. Discuss disposal of hazardous wastes, including mercury, according to the local, state, and federal regulations. c. State the function and handling of mercury. d. Discuss use of a special light for light activated composite resin. e. Describe the disinfection of an impression.
2. Identify various dental materials. a. Survey the types of dental restorations. b. Classify the restorative materials as permanent, temporary, or intermediary bases. c. Cite the physical and biological considerations for selecting dental materials. d. Describe physical, electrical, and mechanical properties of dental materials in definable terms.
3. Describe characteristics of gypsum products. a. Define model, cast, and die. b. Identify the classes of gypsum products. c. Discuss the physical and chemical properties of gypsum products. d. Discuss manipulation of gypsum products.
4. Describe the uses and properties of preventive dental materials. a. Discuss the preventive dental materials: i. Fluoride ii. Pit and fissure sealants iii. Mouth protectors iv. Desensitizers b. List the armamentarium for the finishing and polishing procedures for preventive dental materials. c. Describe the finishing and polishing techniques for preventive dental materials.
5. Explain characteristics of dental cements and liners. a. Summarize the uses of various dental cements, i.e., cementation, base, temporary restorations, liners, and varnish. b. List the cements suitable for cementation and the composition, properties, and manipulation of each:

Competencies and Suggested Objectives
i. Zinc phosphate ii. Zinc oxide eugenol iii. Zinc polycarboxylate iv. Glass ionomer c. List the cements suitable for bases and temporary fillings and the properties and manipulation of each: i. Zinc oxide eugenol ii. Calcium hydroxide d. Differentiate between cavity liner and varnish. e. Discuss the cements used for special applications.
6. Discuss the uses and properties of dental waxes. a. Explain the properties and laboratory use of inlay wax. b. Describe other dental waxes and their uses.
7. Discuss the uses and properties of plastics in dentistry. a. Describe the use of plastics used in prosthetics. b. List the types of direct esthetic restorative material. c. State the composition, setting reaction, properties, and manipulation of unfilled resin. d. Compare the composition and reactions of composite resins. e. Discuss the properties and clinical qualities of composite resins. f. Describe the manipulation of each type of composite resin. g. Explain the ionomers as restorative materials. h. List the armamentarium for the finishing and polishing techniques for plastic dental materials. i. Describe the finishing and polishing techniques for plastic dental materials.
8. Describe the uses and properties of precious and non-precious metals. a. Explain the types and properties of pure gold. b. List the constituents of a gold alloy and the effect of each constituent. c. Describe each of the four types of gold alloys. d. Explain the composition, uses, and general properties of non-precious alloys. e. List the armamentarium for finishing and polishing techniques. f. Describe the finishing and polishing techniques for precious and non-precious metal dental materials.
9. Discuss the properties of amalgam. a. Explain amalgam and its clinical uses. b. State the function of mercury. c. List the composition of amalgam alloys. d. Explain the properties of amalgam: i. Dimensional change ii. Strength iii. Creep iv. Tarnish and corrosion e. Discuss the correct manipulation of amalgam: i. Selection ii. Proportioning iii. Mixing

Competencies and Suggested Objectives
iv. Condensation v. Finishing f. List the armamentarium for finishing and polishing techniques. g. Describe the finishing and polishing techniques for amalgam dental materials.
10. Describe the uses and properties of impression materials. a. List the desirable properties of impression materials. b. Classify impression materials as rigid or flexible. c. State the composition, properties, and use of the following impression materials: i. Impression compound ii. ZOE impression paste iii. Agar hydrocolloid iv. Alginate v. Polysulfide rubber vi. Silicone rubber vii. Polyether rubber d. Describe the steps and supplies necessary to manipulate and take an impression with the following materials: i. Impression compound ii. ZOE impression paste iii. Agar hydrocolloid iv. Alginate v. Rubber materials (1) Polysulfide (2) Silicone/polysiloxane (3) Polyether
11. Demonstrate manipulation of gypsum products. a. Calculate weight of materials and amount of water for pouring a study model impression using metric and apothecary units of measurements. b. Assemble armamentarium for mixing a gypsum product. c. Mix a gypsum product for a cast, a die, and a model.
12. Demonstrate manipulation of dental cements and liners. a. Select armamentarium necessary to prepare a mix of zinc phosphate. b. Prepare a mix of zinc phosphate cement for (1) a luting agent and (2) cement base. c. Select armamentarium necessary to prepare a mix of zinc oxide eugenol (conventional type) and reinforced. d. Prepare a mix of conventional zinc oxide eugenol to be used for (1) a base and (2) treatment filling. e. Prepare a mix of reinforced zinc oxide eugenol for (1) luting, (2) base, and (3) treatment filling. f. Select armamentarium necessary to prepare a mix of polycarboxylate cement. g. Prepare a mix of polycarboxylate cement for luting. h. Select armamentarium for mixing glass ionomer cement. i. Prepare a mix of glass ionomer cement for luting. j. Select equipment and materials necessary to prepare a mix of calcium hydroxide. k. Prepare a calcium hydroxide liner.

Competencies and Suggested Objectives
l. Assemble the armamentarium for the placement of a cavity varnish or base.
13. Demonstrate manipulation of various dental waxes. a. Manipulate various types of processing waxes by: i. Beading an impression tray. ii. Boxing an impression prior to pouring. iii. Taking a wax bite of a classmate.
14. Demonstrate manipulation of dental plastics. a. Mix unfilled resin for repair. b. Fabricate a custom tray and a temporary crown. c. Prepare the equipment and materials required to mix composite resin with 100% accuracy. d. Produce a mix of composite resin. e. Prepare materials to be used with composite resin, glazing agent, acid etching agents, and lights. f. Prepare a mix of autopolymerizing composite resin. g. Prepare a mix of light activated composite resin. h. Demonstrate proper use of a special light for light activated composite resin.
15. Demonstrate manipulation of dental amalgam. a. Prepare the equipment and materials required to manipulate amalgam mechanically with 100% accuracy. b. Produce a mix of amalgam (pre-weighed and conventional).
16. Demonstrate manipulation of impression materials. a. Mix ZOE paste to be used for an edentulous patient. b. Prepare an impression of an edentulous arch on a typodont. c. Pour a model using the edentulous impression. d. Select the necessary equipment and materials to prepare irreversible hydrocolloid (alginate). e. Mix alginate impression material. f. Take an impression of a typodont using alginate material. g. Construct sets of study models using gypsum products. h. Trim sets of study models. i. Set up equipment and materials necessary to prepare reversible hydrocolloid impression material. j. Prepare reversible hydrocolloid impression material. k. Take an impression of a typodont using reversible hydrocolloid impression material. l. Select the necessary equipment and material for the preparation of rubber impression materials. m. Prepare a mix of rubber impression material (polysiloxane, silicone, polysulfide, and polyether). n. Load the syringe with light-bodied rubber impression material. o. Take an impression of a typodont using rubber impression material.

STANDARDS

Dental Assisting National Board Certified Dental Assistant Examination Topics

Infection Control
CDA11 Occupational safety
General Chairside
CDA14 Chairside dental materials (preparation, manipulation, and application)
CDA15 Lab materials and procedures

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R3 Recall Information (details, sequence)
M9 Algebraic Operations
A5 Measurement (money, time, temperature, length, area, volume)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

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Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T3 Technology productivity tools

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Course Name: Dental Science I

Course Abbreviation: DAT 1313

Classification: Vocational-Technical Core

Description: Physiology, anatomy, and morphology as related to the oral cavity. Content organized to include a study of the body systems, the anatomy of the head and neck, and the form of each of the 32 teeth. (3 sch: 3 hr. lecture)

Corequisites: All first semester courses

Competencies and Suggested Objectives
1. Describe primary and permanent dentition. a. Name the individual teeth (primary and secondary) and their proper position. b. Indicate how position relates to dental numbering systems. c. Describe the four groups of teeth and the general functions of each group. d. Describe the five surfaces of both anterior and posterior teeth. e. Identify point and line angles, contact areas, and embrasure areas of the teeth. f. Identify the structures of the crown surfaces of the teeth. g. Name the major parts of the teeth. h. Locate parts of the teeth on a teaching model. i. Describe the differentiating characteristics of the maxillary teeth. j. Describe the differentiating characteristics of the mandibular teeth. k. Discuss occlusion and maintenance of tooth position.
2. Illustrate the anatomy of a tooth. a. Identify the parts of a boley gauge. b. Demonstrate the use of a boley gauge.
3. Describe the anatomy and physiology of the head and neck. a. Identify the bones that are anatomical landmarks of the cranium. b. Identify the bones that form the skeleton of the face. c. Identify the major anatomical landmarks of the mandible. d. Identify the temporomandibular joint. e. Discuss the function of the temporomandibular joint. f. Describe the muscles of mastication and the function of each. g. Locate the paranasal sinuses. h. Describe the function of the paranasal sinuses. i. Identify the major anatomical landmarks of the hard palate. j. Identify the anatomical landmarks of the mouth. k. Locate the salivary glands and ducts. l. Identify the trigeminal nerve and trace the nerve supply to the individual teeth. m. Identify the arteries and veins that supply the head and neck region. n. Explain the circulation of blood supply.
4. Describe the relationships of body systems to the dental patient. a. Relate the importance of basic sciences to dental assisting. b. Define anatomy and physiology.

Competencies and Suggested Objectives
c. Define terms that are used to describe the position of body parts. d. Describe the general composition of the body. e. Identify the four body cavities. f. Describe the major organs included in each body cavity. g. List the components and functions of the skeletal system. h. List the components and functions of the muscular system. i. List the components and functions of the nervous system. j. List the components and functions of the circulatory system. k. List the components and functions of the respiratory system. l. List the components and functions of the digestive system. m. List the components and functions of the respiratory system. n. List the components and functions of the endocrine system. o. List the components and functions of the reproductive system.

STANDARDS

Dental Assisting National Board Certified Dental Assistant Examination Topics

Radiation Health and Safety
CDA3 Mount/label
General Chairside
CDA12 Collection and recording of clinical data

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R3 Recall Information (details, sequence)
A5 Measurement (money, time, temperature, length, area, volume)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

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Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.

WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

SUGGESTED REFERENCES

Anderson, P. C., & Pendleton, A. E. (2001). *The dental assistant* (7th ed.). Albany, NY: Delmar.

Andujo, E. (2003). *Complete review of dental assisting*. Upper Saddle River, NJ: Prentice Hall.

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Course Name: Dental Science II

Course Abbreviation: DAT 1323

Classification: Vocational-Technical Core

Description: Embryology, pharmacology, microbiology, and pathology as related to dentistry. Content organized to give the student basic information required for effective dental assisting. (3 sch: 3 hr. lecture)

Prerequisites: All first semester courses

Competencies and Suggested Objectives

1. Discuss embryology as related to dentistry.
   a. State the function of the following components of a cell:
      i. Nucleus
      ii. Cytoplasm
      iii. Cell membrane
      iv. Ribosomes
      v. Mitochondria
      vi. Centrioles
      vii. Golgi body
      viii. Chromatin (chromosomes)
      ix. Lysosomes
   b. Describe the various functions of cells including the usage of nucleic acids (DNA and RNA).
   c. Explain the differences between mitosis and meiosis by stating and drawing the various stages of each process.
   d. State the characteristics and functions of the four primary types of human tissue.
   e. Name the three basic embryonic cell layers and the structures that form each.
   f. Discuss the branchial arches and the structures that form each of the arches.
   g. Discuss the processes in the early development of the nose and face.
   h. Discuss the early development of the tongue and palate.
   i. Discuss the factors that can affect prenatal development.
   j. Discuss each stage of tooth development.
   k. Discuss the composition and formation of the four major tissues of the teeth.
   l. Discuss the formation of the tissues surrounding the teeth.
   m. Discuss eruption problems.
   n. Discuss the process of eruption of the teeth.
   o. Discuss the eruption sequence for the primary teeth and the approximate ages for each primary tooth erupting into the oral cavity.
   p. State which permanent teeth are succedaneous and which are not.
   q. Discuss the eruption sequence for the permanent teeth and the approximate ages for each erupted permanent tooth.
2. Discuss pharmacology as related to dentistry.
   a. Define pharmacology.

Competencies and Suggested Objectives

b. Describe the different parts of the Controlled Substances Act as follows:
   i. Schedule I
   ii. Schedule II
   iii. Schedule III
   iv. Schedule IV
   v. Schedule V
c. State the difference between generic drugs and brand name drugs.
d. Identify the parts of a prescription and the purpose of each.
e. Explain the purpose of a prescription.
f. Identify the English equivalents of the Latin abbreviations used on a prescription.
g. Discuss the differences between methods of administering drugs.
h. Identify two methods of drug calculation.
i. Identify three factors in a dental office that can lead to deterioration of medications and drugs.
j. Define the terms associated with the effects of drugs on the body.
k. Discuss the following drugs including indications and contraindications:
   i. Analgesics
      (1) Mild analgesics
         (a) Aspirin
         (b) Aspirin-like substitutes
      (2) Strong analgesics
         (a) Morphine
         (b) Codeine
         (c) Dilaudid
         (d) Percodan
         (e) Demerol
         (f) Mepergan Fortis
   ii. Antibiotics
      (1) Penicillin
      (2) Erythromycin
      (3) Tetracycline
      (4) Amoxicillin
   iii. Miscellaneous drugs used in the dental office on patients
      (1) Nystatin
      (2) Vasoconstrictors
      (3) Corticosteroids
      (4) Atropine
      (5) Hemostatic agents
      (6) Topical anesthetics
      (7) Local anesthetics
      (8) Fluorides
      (9) Dentifrices
      (10) Nitrous oxide
      (11) Sedatives
         (a) Chloral hydrate

Competencies and Suggested Objectives

(b) Atarax
(c) Vistaril

l. State the purpose of the following drugs commonly seen on a patient's medical history:
   i. Nitroglycerin
   ii. Quinidine
   iii. Digitalis
   iv. Diuril
   v. Chlorothiazide
   vi. Valium
   vii. Librium
   viii. Dilantin
   ix. Coumadin
   x. Corticosteroids
   xi. Insulin
   xii. Digitoxin
   xiii. Thyroxin

m. Identify the brand names and chemical names of commonly used local anesthetics in the dental office.

3. Discuss microbiology as related to dentistry.
   a. Describe the major events of the history of microbiology.
   b. Explain the five different types of microorganisms and the physical characteristics of each (protozoa, bacteria, fungi, virus, rickettsia).
   c. Identify the major parts of a microscope and the proper care and use of the scope.
   d. Prepare a mouth smear.
   e. Identify the three shapes of bacteria using prepared slides and the microscope.
   f. List methods by which microorganisms produce disease.
   g. Define terms associated with pathogenic and non-pathogenic microorganisms.
   h. Discuss methods by which disease may be transmitted in a dental office.
   i. Discuss resistance to infection by the host and related terms.
   j. Define inflammation and the signs related to inflammation.
   k. Discuss microorganisms associated with dental caries, periodontal problems, and pulp conditions.

4. Discuss oral pathology as related to dentistry.
   a. Define the three factors which cause oral disorders.
   b. Discuss reaction of tissue to injury, and the behavior of cells and the structural changes that result from injury.
   c. Describe distinguishing characteristics of developmental anomalies that occur in the oral cavity.
   d. Describe characteristics of developmental anomalies that occur in tooth development.
   e. Define terms describing hard tissue defects that may occur during tooth formation.
   f. Define terms relative to pathological conditions that occur after the teeth have erupted.
   g. Explain the pathological and developmental conditions of dental caries as characterized by decalcification and microbial invasion.
   h. Describe dental pulp disorders by defining given terms and stating the conditions and treatment of the disorder.

Competencies and Suggested Objectives

i. Write a descriptive account of periodontal conditions.
j. Define the terms related to oral mucous membrane conditions.
k. Discuss conditions that are caused by viral infections.
l. Describe canker sores and the causative agent.
m. Identify diseases caused by fungus infections.
n. Define benign neoplasm.
o. Define malignant neoplasms.
p. Prepare a report on oral cancer.
q. Discuss oral pigmentation, traumatic, thermal, and chemical injuries to the teeth and related structures.

STANDARDS

Dental Assisting National Board Certified Dental Assistant Examination Topics

Infection Control

CDA6 Patient and dental healthcare worker education
CDA7 Prevent cross-contamination and transmission
CDA8 Maintain aseptic conditions
CDA9 Perform sterilization procedures
CDA10 Environmental asepsis
CDA11 Occupational safety

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R3 Recall Information (details, sequence)
A3 Data Interpretation (graph, table, chart, diagram)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

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Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.

WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T3 Technology productivity tools

SUGGESTED REFERENCES

Anderson, P. C., & Pendleton, A. E. (2001). *The dental assistant* (7th ed.). Albany, NY: Delmar.

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Torres, H. O., & Mazzucchi-Ballard, L. E. (1994). *Dental assisting examination preparation*. Philadelphia: W. B. Saunders.

Course Name: Chairside Assisting I

Course Abbreviation: DAT 1415

Classification: Vocational-Technical Core

Description: Comprehensive study of information relating to assisting at the dental chair. Laboratory sessions include all phases of chairside assisting from seating the patient to post-operative care in the treatment room. (5 sch: 2 hr. lecture, 6 hr. lab)

Corequisites: All first semester courses

Competencies and Suggested Objectives
1. Describe infection control procedures in a preclinic setting. a. Explain safety procedures for preclinical setting. b. Define terms related to sterilization. c. Describe methods used in a dental office to disinfect or sterilize. d. Differentiate between the different levels of EPA-approved chemical disinfectants. e. State the importance of infection control. f. Describe the various modes of disease transmission. g. State the various factors related to disease producing capabilities. h. Define terms related to infection control. i. Differentiate between HBV and HIV. j. State OSHA guidelines regarding standard operating procedures for infection control. k. Describe barrier techniques.
2. Demonstrate infection control procedures in a preclinic setting. a. Demonstrate handwashing technique. b. Prepare instruments for sterilization and storage. c. Demonstrate barrier placement. d. Demonstrate handling of instruments to maintain asepsis.
3. Assess patient data. a. State the importance of taking an accurate medical and dental history. b. Recognize the vital signs of the patient: i. Pulse ii. Respiration rate iii. Blood pressure iv. Temperature v. Pupils of the eyes vi. State of consciousness vii. Ability to move extremities viii. Reaction to pain c. Identify the equipment for measuring the vital signs. d. Measure the following: i. Pulse ii. Temperature iii. Blood pressure

Competencies and Suggested Objectives
iv. Respiration rate e. Record the following: i. Pulse ii. Temperature iii. Blood pressure iv. Respiration rate
4. Describe the role of the assistant in chairside emergencies. a. Describe the contents of the emergency kit and other emergency equipment and their use. b. Describe the role in providing first aid for the following medical emergencies: i. Shock (all types) ii. Pulmonary arrest iii. Cardiac arrest iv. Diabetes mellitus v. Hypoglycemia vi. Epilepsy vii. Drug addiction viii. Angina pectoris ix. Heart attack x. Heart failure xi. Apoplexy xii. Choking xiii. Fainting c. Discuss emergencies of dental origin and their treatment.
5. Describe the equipment in a dental office. a. Identify the major components of a dental operating chair. b. Describe the procedures in performing minor adjustments on the chair. c. Identify the component parts of the dental unit. d. Identify other major equipment in the dental laboratory. e. Explain the use of each piece of equipment. f. Demonstrate how to perform required maintenance on the dental operating unit and light.
6. Demonstrate the use of selected equipment found in a dental office. a. Perform the steps involved in the proper care of the dental operating chair. b. Demonstrate the use of the various levers and switches found on the chair. c. Demonstrate air and water technique to the operating field without injuring tissue or impairing the vision of the operator. d. Position the evacuator tip for operating on the quadrants and for buccal, labial, and lingual approach without impairing the vision of the operator and without injuring the soft tissue. e. Demonstrate the proper placement of the saliva ejector. f. Demonstrate the use of sterilizers. g. Position the patient comfortably in the dental chair for operating on teeth in each of the quadrants. h. Adjust the operating stools for the dentist and assistant. i. Demonstrate the positions of the patient, operator, and assistant during four-handed operative dentistry.

Competencies and Suggested Objectives
7. Explain the role of the assistant in four-handed dentistry. a. Describe the role of each of the following in providing chairside dental care: i. Dental assistant ii. Dentist b. Describe the general duties to be performed in the morning in preparation for the first patient, in preparing patient for treatment, in dismissing the patient, and the end-of-the-day responsibilities. c. Discuss the concept of dental assisting in four-handed dentistry technique. d. Relate duties performed by the dental assistant during an oral prophylaxis. e. Describe how the dental assistant anticipates the need for instruments used during an oral prophylaxis by the operator. f. Demonstrate the role of the assistant in the amalgam procedure. g. Demonstrate the role of the assistant in a composite procedure.
8. Demonstrate the use of hand instruments. a. Demonstrate the various techniques used in the transfer of hand instruments. b. Identify the parts of cutting and non-cutting hand instruments. c. Demonstrate the principal instrument grasps used in four-handed dentistry. d. Demonstrate the pass-and-receive technique for four-handed dentistry. e. Demonstrate manipulation of medicaments for use during dental procedures. f. Apply a mirror, a tongue depressor, or a retractor to the cheek for operation on the quadrants without impairing the vision of the operator and without injury or discomfort to the patient. g. List the instruments and steps involved in conducting an oral examination. h. Describe instruments used in restorative and operative dentistry.
9. Explain the use of rotary instruments. a. Assemble and disassemble the straight handpiece. b. Explain the use and maintenance of the prophylaxis handpiece. c. Explain the various rotary cutting instruments and methods of identification. d. Explain the various sections and maintenance of the angle handpiece. e. Discuss the reasons for using ultra speed equipment and its maintenance.
10. Implement charting techniques. a. Describe the various types of teeth by arch, quadrant, and position. b. Utilize the Universal Numbering System in identifying teeth. c. Describe symbols used in charting. d. Classify cavities according to their location. e. Chart existing restorations on both a permanent and deciduous chart. f. Chart cavities and any treatment needed by the patient on both permanent and deciduous charts.
11. Demonstrate the procedure for local anesthesia. a. Prepare anesthetic setup. b. Demonstrate the dental assistant's role in administering local anesthesia.
12. Describe the amalgam procedure. a. Define operative dentistry and its functions. b. Describe the steps, in sequence, of cavity preparation. c. Describe the steps involved in placing amalgam restorations.

Competencies and Suggested Objectives
d. Demonstrate assembly and placement of a matrix band on a typodont. e. Describe the steps and instruments, in sequence, used to complete an amalgam restoration. f. List the steps and instruments, in sequence, for polishing amalgam restorations.
13. Describe the composite procedure. a. Describe the uses of the various instruments used in composite resin restorations. b. List the steps, in sequence, involved in a composite resin procedure.
14. Demonstrate the procedure for a temporary restoration. a. Describe the instruments and materials needed for placing a temporary restoration. b. Place and remove a temporary restoration using hand instruments.
15. Discuss an overview of chairside procedures for fixed prosthodontics. a. Explain the need for fixed prosthodontics. b. Describe the procedure for the initial appointment for crown and bridge procedures. c. Describe the procedures for the cementation of a crown or bridge.
16. Discuss an overview of endodontic procedures. a. Explain the need for endodontic procedures. b. Describe the procedure for completing root canal therapy.
17. Discuss an overview of oral surgery procedures. a. Explain the need for oral surgery. b. Describe the procedures for a basic oral extraction.

STANDARDS

Dental Assisting National Board Certified Dental Assistant Examination Topics

Infection Control

CDA6 Patient and dental healthcare worker education
CDA7 Prevent cross-contamination and transmission
CDA8 Maintain aseptic conditions
CDA9 Perform sterilization procedures
CDA10 Environmental asepsis
CDA11 Occupational safety

General Chairside

CDA12 Collection and recording of clinical data
CDA13 Chairside dental procedures
CDA14 Chairside dental materials (preparation, manipulation, and application)
CDA17 Prevention and management of emergencies

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R3 Recall Information (details, sequence)
A3 Data Interpretation (graph, table, chart, diagram)
A5 Measurement (money, time, temperature, length, area, volume)

L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L4 Capitalization (proper noun, titles)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

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Workplace Skills for the 21st Century

WP1 Allocates resources (time, money, materials and facilities, and human resources).
WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T3 Technology productivity tools

SUGGESTED REFERENCES

Anderson, P. C., & Pendleton, A. E. (2001). *The dental assistant* (7th ed.). Albany, NY: Delmar.

Andujo, E. (2003). *Complete review of dental assisting*. Upper Saddle River, NJ: Prentice Hall.

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Torres, H. O., & Mazzucchi-Ballard, L. E. (1994). *Dental assisting examination preparation*. Philadelphia: W. B. Saunders.

Course Name: Chairside Assisting II

Course Abbreviation: DAT 1423

Classification: Vocational-Technical Core

Description: Continuation of the study of information related to assisting at the dental chair. Emphasis on techniques utilized in performing all dental procedures at the chair. Special consideration to assisting in the dental specialties. (3 sch: 2 hr. lecture, 2 hr. lab)

Pre/corequisites: Chairside Assisting I (DAT 1415)

Competencies and Suggested Objectives
1. Describe oral surgery procedures. a. List the stages of surgical procedures. b. Perform preoperative preparation for oral surgery. c. Describe the four planes of general anesthesia. d. Differentiate between analgesic and anesthetic. e. State the application of N_2O to dentistry. f. State the necessary precautions applicable to N_2O and the dental office. g. List the proper equipment necessary for N_2O administration in the office. h. Demonstrate the steps in N_2O administration. i. Discuss appropriate care and storage of nitrous and oxygen tanks. j. Describe the steps involved in the removal of maxillary and mandibular teeth. k. Identify the type of instruments ordinarily used in the extraction of the maxillary and mandibular teeth. l. Anticipate the need for the type of instruments ordinarily used by the dentist in the extraction of maxillary and mandibular teeth. m. List the steps and instruments involved in the removal of impacted teeth. n. Anticipate the need for the type of instruments ordinarily used by the dentist to remove impacted teeth. o. List the steps and instruments used in placing a suture. p. Demonstrate the removal of a suture. q. Assist with and control minor bleeding after extraction or incision. r. Assist with, mix, change, and remove post-extraction dressings. s. List the conditions and instruments associated with a dry socket and the steps involved in treatment. t. Identify the steps and instruments involved in frenectomy. u. List the steps and instruments involved in the performance of an alveolectomy. v. List the steps and instruments involved in a biopsy. w. List the steps and instruments involved in removing a cyst. x. List the major steps and instruments involved in the treatment of a jaw fracture. y. State the causes, characteristics, and the stages of infection. z. Give post-operative instructions to the patient. aa. Provide care and storage of sterile and sterile disposable products. bb. Recognize medications related to the patient's present and past medical and dental

Competencies and Suggested Objectives
history. cc. Demonstrate preventive measures to be used following drug administration to avoid drug-induced emergencies. dd. Recognize signs and symptoms related to specific dental conditions and emergencies likely to occur in the office. ee. Implement or assist with procedures for the management of dental emergencies. ff. Implement techniques for the prevention of medical emergencies in patients with past medical problems.
2. Describe periodontal procedures. a. Discuss normal periodontium. b. List the diagnostic tools used in the evaluation of periodontal disease. c. Use plaque and gingival index to record symptoms of gingivitis. d. Discuss the local factors in the etiology of periodontal disease. e. Explain the factors involved in an oral prophylaxis and the information that should be given to the patient as to the need for the regular oral prophylaxis. f. Describe the incidence of calculus position and its removal. g. List the armamentarium needed for polishing the teeth following scaling. h. Demonstrate proper technique for polishing in a preclinical setting. i. Describe pericoronitis and its treatment. j. List the steps and instruments involved in subgingival curettage. k. List the steps and instruments needed in performing a gingivectomy. l. List the procedure for post-operative treatment of a gingivectomy. m. Assist with, mix, change, and remove periodontal surgical dressings and sedative dressings. n. Describe osseous corrective surgery.
3. Describe endodontic procedures. a. Describe the use of each item required in rubber dam application. b. List the steps and instruments involved in the application of the rubber dam. c. Place a rubber dam on a dentiform. d. Describe the most common endodontic procedures performed in the dental office. e. List traumatic injuries that may occur to teeth. f. List the names and clinical manifestations of dental pulp diseases. g. State the diagnostic method used in pulpal and periapical conditions. h. Perform a vitality test. i. Demonstrate isolation of teeth and control of saliva. j. Describe the use of root canal instruments. k. Discuss bacteriology as related to endodontics. l. State objectives and procedures used in pulp capping and pulpotomies. m. List the steps and instruments involved in root canal therapy for each phase of treatment. n. List the steps and instruments used in an apicoectomy. o. Describe the bleaching techniques.

STANDARDS

Dental Assisting National Board Certified Dental Assistant Examination Topics

Infection Control
CDA7 Prevent cross-contamination and transmission
CDA8 Maintain aseptic conditions
CDA9 Perform sterilization procedures
CDA10 Environmental asepsis
CDA11 Occupational safety
General Chairside
CDA13 Chairside dental procedures

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R3 Recall Information (details, sequence)
A3 Data Interpretation (graph, table, chart, diagram)
A5 Measurement (money, time, temperature, length, area, volume)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

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Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts

SUGGESTED REFERENCES

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Torres, H. O., & Mazzucchi-Ballard, L. E. (1994). *Dental assisting examination preparation*. Philadelphia: W. B. Saunders.

Course Name: Chairside Assisting III

Course Abbreviation: DAT 1433

Classification: Vocational-Technical Core

Description: Continuation of Chairside Assisting II. (3 sch: 2 hr. lecture, 2 hr. lab)

Pre/corequisites: Chairside Assisting II (DAT 1423)

Competencies and Suggested Objectives
1. Describe the procedure for fixed prosthodontics. a. Describe the importance of fixed prosthesis. b. List types of bridges, types of facings, and materials used for bridge fabrication. c. List the steps involved in bridge fabrication. d. Make a preliminary impression. e. Pour the impression to the specification of the instructor. f. Given a set of poured models, separate, trim, and articulate the models. g. Using a prepared model, demonstrate the use of a vacuum former. h. Prepare a temporary prosthesis. i. Prepare an acrylic (custom) tray. j. Demonstrate the manipulation of hydrocolloid for the final impression. k. Demonstrate the manipulation of rubber material for the final impression. l. Demonstrate the handling of a final impression following removal from the mouth. m. Explain the steps for making a removable die. n. Outline investment and casting procedures according to instructor's criteria. o. List the steps and instruments involved in the cementation of a fixed prosthesis.
2. Describe procedures for removable prosthodontics. a. List the steps involved in the preliminary impression, final impression, registration of jaw relations, try-in, and insertion of partial denture. b. Explain the use of various armamentarium needed to accomplish steps involved in partial denture prosthesis. c. List the major steps involved in taking the preliminary impression, final impression, registration of jaw relations, try-in, and insertion of complete denture prosthesis. d. Demonstrate the ability to prepare and assist with various armamentarium needed to accomplish steps involved in complete denture prosthesis. e. Repair a broken appliance. f. Clean and polish an appliance.
3. Describe procedures for pedodontics. a. Discuss pedodontics. b. Discuss the primary dentition. c. Discuss pedodontic practice management. d. Relate behavior patterns of the child to the dental office. e. Discuss growth and development in stages of 1-6 years and 6-12 years. f. Explain patient management techniques for handicapped and problem patients. g. State the role of the parent in successful pedodontic procedures.

Competencies and Suggested Objectives
h. Discuss the role of the dental assistant in the first appointment and consultation. i. State the importance of preventive dentistry for children. j. Demonstrate topical fluoride application. k. Explain the various modalities of fluoride administration and the dangers and results of overdosage. l. Demonstrate the use of autopolymerizing pit and fissure sealants. m. Demonstrate the use of light activated pit and fissure sealants. n. Discuss the assistant's role in operative pedodontics. o. List the steps and instruments involved in stainless steel crown placement. p. Explain the procedure involved in pulp therapy (pulp capping and pulpotomy). q. Assemble the proper armamentarium for endodontic procedures performed in pedodontics. r. State the importance of prosthetics in pedodontics. s. Assemble the proper armamentarium for prosthetic procedures in the pedodontic office. t. Discuss procedures used in emergency treatment for traumatized teeth.
4. Describe procedures for orthodontics. a. Discuss orthodontics and the goals that orthodontists strive to achieve. b. Discuss the history of orthodontics. c. Discuss etiology as it pertains to orthodontics. d. Review embryology and histology relating to the formation of the skull and facial complex. e. Define diagnosis, occlusion, and malocclusion. f. State the classification of malocclusion according to Dr. Angle. g. Discuss the diagnostic aids used by the orthodontist in treatment planning. h. Describe the principles of tooth movement. i. Describe all types of orthodontic appliances used in treatment: i. Retainer ii. Crozat iii. Edgewise iv. Habit j. Identify instruments and equipment used in orthodontic treatment. k. Assemble armamentarium for orthodontic treatment. l. Discuss responsibilities of the patient and parent during treatment. m. Describe the removal of cement after a permanent appliance is removed.

STANDARDS

Dental Assisting National Board Certified Dental Assistant Examination Topics

Infection Control

CDA6 Patient and dental healthcare worker education
CDA7 Prevent cross-contamination and transmission
CDA8 Maintain aseptic conditions
CDA9 Perform sterilization procedures
CDA10 Environmental asepsis

CDA11 Occupational safety

General Chairside

CDA13 Chairside dental procedures
CDA14 Chairside dental materials (preparation, manipulation, and application)
CDA15 Lab materials and procedures
CDA16 Patient education and oral health management

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R3 Recall Information (details, sequence)
A5 Measurement (money, time, temperature, length, area, volume)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

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Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T3 Technology productivity tools
T6 Technology problem-solving and decision-making tools

SUGGESTED REFERENCES

Anderson, P. C., & Pendleton, A. E. (2001). *The dental assistant* (7th ed.). Albany, NY: Delmar.

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Torres, H. O., & Mazzucchi-Ballard, L. E. (1994). *Dental assisting examination preparation*. Philadelphia: W. B. Saunders.

Course Name: Dental Radiology I

Course Abbreviation: DAT 1513

Classification: Vocational-Technical Core

Description: Principles and safety precautions in dental radiology. Laboratory sessions include positioning, exposing, processing, and mounting bite-wing, occlusal, and periapical dental radiographs on a manikin. (3 sch: 2 hr. lecture, 2 hr. lab)

Corequisites: All first semester courses

Competencies and Suggested Objectives
1. Describe the development of dental x-ray technology. a. Identify the historical events in the discovery of x-rays. b. Discuss the people involved in the development of radiology.
2. Describe safety factors in relation to radiation biology. a. Answer questions patients most commonly ask about dental x-ray safety and procedures. b. Explain the principles of ionizing radiation. c. Describe the formation of ion pairs and the effects of ionizing radiation on living tissues. d. Define terms relating to radiation measurement. e. List the types of background radiation to which the population is exposed. f. Describe the differences between somatic and genetic tissues. g. List the body tissues according to their radiosensitivity. h. List long-term effects of radiation exposure. i. List the most common and earliest symptom of overexposure to radiation. j. Discuss the methods used for protection of the patient and the operator. k. Discuss radiological considerations used for pregnant patients and patients with a history of radiation therapy. l. Discuss the need for dental radiographs in oral diagnosis.
3. Explain the properties of dental x-ray radiation. a. Discuss electromagnetic radiation and the various types of radiations on the electromagnetic spectrum. b. Define the terms associated with electricity and how each relates to radiation production. c. Discuss the three types of radiation associated with dental x-rays. d. Describe the parts of an x-ray tubehead and the function of each part. e. Discuss in detail how x-rays are produced in the x-ray tubehead. f. Discuss the function and purpose of each of the controls on the control box of a dental x-ray machine. g. Discuss the terms milliamperage and kilovoltage, and the relationship among milliamperage, kilovoltage, quality, quantity, wavelength, and penetration of x-rays. h. Describe the effects of filtration and collimation on x-ray production. i. List the recommended filtration and collimation for x-ray machines operating at various kVp settings. j. Differentiate among density, contrast, detail, and distortion. k. Explain the factors that influence contrast, detail, density, and distortion.

Competencies and Suggested Objectives
l. Discuss how target-to-film-distance (TFD) affects the image on a radiograph. m. Explain the inverse square law.
4. Discuss auxiliary techniques in patient management for exposing radiographs. a. Discuss criteria involved in radiographing the mandibular and maxillary tori patient. b. Discuss techniques involved in radiographing narrow and cleft palate patients. c. Discuss techniques in radiographing children. d. Discuss techniques in radiographing edentulous patients. e. Discuss techniques used for taking x-rays on endodontic patients. f. Discuss techniques in exposing radiographs on handicapped patients. g. Discuss techniques used in radiographing patients with a gag reflex. h. Discuss criteria used in radiographing uncooperative patients.
5. Differentiate various types of x-ray films. a. Discuss the various types of dental x-ray film (both intraoral and extraoral), the use of each, and the proper care and storage of each. b. Explain the speed rating of dental x-ray film by relating what determines film speed, the effect of fast speed film, and speed groups of A to F. c. Identify the purposes of the three most commonly used extraoral films.
6. Demonstrate the processing of dental film. a. Describe the composition properties of an x-ray film. b. Discuss the essential components of a well-equipped darkroom. c. Discuss the chemistry of development, fixation, washing, and drying of exposed radiographs. d. Explain the purpose of each chemical in the processing solutions. e. Operate the darkroom apparatus and equipment by producing an acceptable processed film. f. List the times and temperatures for each of the solutions in manually processing an x-ray film. g. Clean and replenish the processing equipment and solutions. h. Identify processing errors and the corrective procedures for each. i. Describe the procedure for the use of an automatic processor. j. Describe the procedure of quick processing. k. Describe the procedure for duplicating radiographs. l. Demonstrate infection control procedures in the darkroom.
7. Identify normal anatomical landmarks used for mounting radiographs. a. Identify maxillary and mandibular anatomical landmarks on a full mouth series of radiographs. b. Identify maxillary and mandibular anatomical landmarks on a panoramic radiograph. c. Mount radiographs in proper sequence using a full mouth series mount.
8. Describe the techniques used in exposing intraoral radiographs. a. Discuss the techniques used in making intraoral radiographs. b. Describe the film holders used and the positioning of the patient and of the film. c. Demonstrate the positioning of the tubehead and the PID for each technique. d. Demonstrate the vertical and horizontal angulation needed for each technique. e. Identify the purposes and uses of bitewing films. f. Demonstrate the positioning of the bitewing film, including vertical and horizontal

Competencies and Suggested Objectives
angulation. g. Demonstrate the procedure for positioning, exposing, and processing a full mouth series of radiographs. h. Identify unacceptable radiographs, the errors and their causes, and appropriate corrective action. i. Describe the need and procedure for exposing occlusal radiographs. j. Prepare operatory using infection control techniques. k. Expose film following infection control techniques. l. Discuss the use of digital radiography in a dental setting.
9. Describe the techniques used in exposing extraoral radiographs. a. Describe the technique for positioning, exposing, and processing the most common extraoral film exposures. b. Demonstrate the operation of the panoramic machine. c. Demonstrate the technique for positioning, exposing, and processing panoramic film on a patient. d. Discuss the settings for the panoramic machine on different types of patients. e. Prepare operatory using proper infection control techniques. f. Expose film following proper infection control techniques.

STANDARDS

Dental Assisting National Board Certified Dental Assistant Examination Topics

Radiation Health and Safety

CDA1 Expose and evaluate (intraoral and extraoral)
CDA2 Process
CDA3 Mount/label
CDA4 Radiation safety for patient
CDA5 Radiation safety for operator

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
M3 Multiplication of Whole Numbers (no regrouping, regrouping)
M4 Division of Whole Numbers (no remainder, remainder)
M5 Decimals (addition, subtraction, multiplication, division)
M6 Fractions (addition, subtraction, multiplication, division)
M7 Integers (addition, subtraction, multiplication, division)
M9 Algebraic Operations
A3 Data Interpretation (graph, table, chart, diagram)
A5 Measurement (money, time, temperature, length, area, volume)
A6 Geometry (angles, Pythagorean theory)

L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)

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Workplace Skills for the 21st Century

WP1 Allocates resources (time, money, materials and facilities, and human resources).
WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T2 Social, ethical, and human issues
T3 Technology productivity tools
T6 Technology problem-solving and decision-making tools

SUGGESTED REFERENCES

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Course Name: Dental Radiology II

Course Abbreviation: DAT 1522

Classification: Vocational-Technical Core

Description: Continuation of Dental Radiology I. Emphasis placed on clinical competence in exposing periapical radiographs. (2 sch: 4 hr. lab)

Prerequisites: Dental Radiology I (DAT 1513)

Competencies and Suggested Objectives
1. Demonstrate full mouth x-rays on mannequins and patients. a. Take a set of full mouth x-rays on a mannequin. b. Take a minimum of five sets of full mouth x-rays on a patient. c. Take a minimum of two panoramic exposures on patients.
2. Correlate skills from areas with knowledge obtained from didactic and preclinical experience. a. Identify the sequence of steps followed to operate the dental x-ray machines. b. Demonstrate the procedures for maintaining radiation safety. c. Compare the various intraoral films according to size, customary usage, and film speed. d. Explain the procedure for film duplicating, in sequence. e. Demonstrate methods of film handling and storage. f. Demonstrate the sequence of steps in processing radiographs. g. Determine whether a periapical radiograph is of the right or left side by placing it correctly in a mount. h. Position the PID for any given periapical radiograph according to its exact location in the maxilla or mandible. i. Identify the types of radiographic errors caused by faulty exposure techniques. j. Identify the types of radiographic errors caused by incorrect film positioning and angulation of the central ray. k. Identify the types of radiographic errors caused by faulty processing techniques. l. Identify the conditions that cause radiographs to be fogged. m. Compare the principles of the paralleling and bisecting techniques. n. Locate the points of entry on the face. o. Differentiate between the methods used to obtain proper horizontal and vertical angulation. p. Identify the advance preparations required before radiographs are exposed, to include selecting the type and number of film required to make a complete periapical survey and assembling film holders for the paralleling and bisecting the angle techniques. q. Position film holders for the paralleling and bisecting the angle techniques. r. Differentiate between the methods of positioning the film packet when using the bisecting and the paralleling techniques. s. Select the type and number of films required to make the bitewing survey. t. Demonstrate the difference between periapical and bitewing radiographs. u. Demonstrate on patients the methods of holding the bitewing film in position.

Competencies and Suggested Objectives
v. Identify the positions of film placement and the vertical and horizontal angulations normally used for the bisecting angle method. w. Produce at least two panoramic dental x-rays on human patients. x. Process film including the mounting in a full mouth mount.

STANDARDS

Dental Assisting National Board Certified Dental Assistant Examination Topics

Radiation Health and Safety
CDA1 Expose and evaluate (intraoral and extraoral)
CDA2 Process
CDA3 Mount/label
CDA4 Radiation safety for patient
CDA5 Radiation safety for operator
Infection Control
CDA6 Patient and dental healthcare worker education
CDA7 Prevent cross-contamination and transmission
CDA8 Maintain aseptic conditions
CDA9 Perform sterilization procedures
CDA10 Environmental asepsis
CDA11 Occupational safety
General Chairside
CDA12 Collection and recording of clinical data
CDA17 Prevention and management of emergencies
CDA18 Office management procedures

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
A3 Data Interpretation (graph, table, chart, diagram)
A4 Pre-Algebra and Algebra (equations, inequality)
A5 Measurement (money, time, temperature, length, area, volume)
A6 Geometry (angles, Pythagorean theory)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
S1 Vowel (short, long)

S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

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Workplace Skills for the 21st Century

WP1 Allocates resources (time, money, materials and facilities, and human resources).
WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T2 Social, ethical, and human issues
T3 Technology productivity tools
T4 Technology communications tools
T5 Technology research tools
T6 Technology problem-solving and decision-making tools

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Course Name: Dental Health Education

Course Abbreviation: DAT 1612

Classification: Vocational-Technical Core

Description: Study of the nutritional needs of the body. Emphasis on nutritional requirements for maintaining good oral hygiene. Comprehensive study of the dental assistant's responsibilities in patient education as related to good oral health. (2 sch: 2 hr. lecture)

Prerequisites: All first semester courses

Competencies and Suggested Objectives

1. Discuss preventive dental procedures.
   a. Describe the philosophy of preventive dentistry as it relates to dental and community education.
   b. Define special dental health needs due to physical status, age, and other factors.
   c. Define plaque and its relationship to caries and periodontal disease.
   d. Discuss guidelines for purchasing a new toothbrush and the use of automatic toothbrushes.
   e. Demonstrate the various methods of toothbrushing and their indications.
   f. Demonstrate the use of dental floss.
   g. Define dentifrices and the agents that make up a dentifrice.
   h. Describe the forms of dentifrices and the various types of dentifrices available to the public.
   i. List various oral hygiene aids and the use of each.
   j. Formulate a prevention treatment program for a patient.
   k. Provide oral hygiene instructions (OHI) that are suitable for the average patient.
   l. Prepare a handout to teach the average patient how to maintain good oral hygiene.
   m. Describe various audiovisual aids for patient education.
   n. Review the order of procedures for a prophylaxis.
   o. List the sources of fluoride and the benefits of fluorides when added to the community water supply.
   p. Explain the methods of topical application of fluoride.
   q. Prepare a report on one or more of the following:
      i. Modalities of fluoride
      ii. Etiology of periodontal disease
      iii. Extramural community experience
      iv. Oral physiotherapy
2. Discuss the role of nutrition in dental health.
   a. State the relationship between diet and nutrition with good dental health.
   b. Define nutrition, nutrients, diet, calorie, malnutrition, and metabolism.
   c. List factors that influence food habits.
   d. Name the groups in the Food Guide Pyramid, an example of food from each group, and the essential nutrient each group provides.
   e. List the six essential nutrients.

Competencies and Suggested Objectives

f. Discuss the digestion, utilization, and functions of protein.
g. Discuss the digestion, utilization, and functions of carbohydrates.
h. Describe to the patient the role that carbohydrates play in dental disease.
i. Prepare a sweet intake summary.
j. Discuss the digestion, utilization, and functions of fats.
k. Discuss the digestion, utilization, and functions of water.
l. Discuss the digestion, utilization, and functions of minerals.
m. Discuss the digestion, utilization, and functions of vitamins.
n. Discuss how nutritional deficiencies are reflected in the oral cavity.
o. Complete a dietary evaluation.
p. Plan a diet acceptable for a:
    i. Child with rampant caries
    ii. Surgery patient
    iii. Jaw fracture patient
    iv. TMJ patient
    v. Periodontal patient
q. Discuss the diet and nutrition of special situation patients, including the following situations:
    i. Caries
    ii. Periodontal patient
    iii. Pregnancy and lactation
    iv. Pedodontic
    v. Stress infection and injury
    vi. Aging patient
    vii. Systemic disease
    viii. Cancer patient

STANDARDS

Dental Assisting National Board Certified Dental Assistant Examination Topics

General Chairside
CDA16 Patient education and oral health management

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)

L4 Capitalization (proper noun, titles)
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L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

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Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T2 Social, ethical, and human issues
T3 Technology productivity tools
T4 Technology communications tools
T5 Technology research tools

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Course Name: Practice Management

Course Abbreviation: DAT 1714

Classification: Vocational-Technical Core

Description: Comprehensive study of the dental office business procedures. Topics covered: patient contact, patient records, insurance, financial records, telephone usage, office management, basic skills in psychology, and professional ethics. (4 sch: 3 hr. lecture, 2 hr. lab)

Prerequisites: All first semester Dental Assisting courses

Competencies and Suggested Objectives
1. Describe duties of the dental office personnel. a. List the principal duties of the patient care providers including the dentist, the dental assistant, and the dental hygienist. b. List the duties of other office personnel including the lab technician and clerical support staff.
2. Discuss telephone etiquette. a. Describe items needed for good telephone technique. b. Demonstrate the ability to handle incoming telephone calls. c. Discuss how to schedule appointments, change appointments, confirm appointments, handle broken appointments, and make emergency appointments. d. Discuss the professional responsibility of the office to maintain an accurate recall system.
3. Describe various record keeping procedures. a. Complete a patient registration form. b. State the importance of a medical and dental history. c. Review treatment charts and charting symbols. d. Discuss the different methods of filing patient and business records. e. Discuss the basic rules of filing. f. Discuss the importance of patient confidentiality and the HIPAA guidelines.
4. Prepare a dental insurance form. a. Define dental insurance terms and coverage. b. Complete an insurance form (attending dentist statement). c. Discuss current trends involving third party payors (managed care, HMO, PPO, and others) and how these may affect the future of dentistry.
5. Describe bookkeeping procedures in a dental office. a. Discuss different bookkeeping systems. b. Describe methods of recording and charging payments. c. Demonstrate making pegboard entries, charge slips, and ledger cards. d. Demonstrate knowledge of banking by writing a check, preparing a bank deposit, and reconciling a bank statement. e. Discuss what a statement is and when statements are prepared. f. Discuss the different methods of collection and when each method is indicated. g. Define overhead, gross income, and net income. h. Describe an inventory system and the terms associated with supplies and inventory.

Competencies and Suggested Objectives
i. Define the terms associated with disbursements (COD, petty cash, and others). j. Define terms related to payroll withholding. k. Demonstrate how to compute payroll. l. Explain procedures for remitting government taxes.
6. Discuss general office procedures. a. Explain the procedure to handle incoming and outgoing mail. b. Describe the various business letter forms. c. Discuss general office correspondence. d. Describe the purpose of an office manual and its content.
7. Utilize dental-related computer software. a. State the uses of the computer in the dental office. b. Demonstrate the use of dental practice management computer software, including: i. Appointments ii. Billing iii. Generating insurance forms iv. Patient records v. General office correspondence
8. Describe employability skills. a. Discuss the importance of professional work ethics to the employee and the office. b. Research job opportunities for dental assistants. c. List important factors for seeking employment. d. Discuss what a resume is, what information it should include, and how to prepare one. e. Explain the purpose of the cover letter and how to prepare one. f. Discuss the importance of proper attire for an interview. g. Discuss the importance of the interview. h. List frequently asked questions during an interview. i. Discuss ways to adjust to the job and new environment quickly and smoothly. j. Discuss lifelong learning in the field. k. Write a letter of resignation.
9. Discuss interpersonal skills needed in the dental practice. a. Explain the environmental factors which have a psychological effect on the patient. b. Discuss the role of each member of the dental team. c. Discuss the employee's relationship to the formal and informal systems of the dental office. d. Discuss the development of one's personality and how it can affect patients in the office for treatment. e. Describe patients' fears related to the dental office and to dental treatment. f. Differentiate between fears that adults have and those of children. g. Discuss ways that a dental team can reduce anxiety and fear in their patients. h. Discuss ways to communicate with patients, fellow employees, and the dentist. i. List some ways to reduce stress while working in the dental office. j. List the most common reactions or responses to stress and frustrations associated with the dental office. k. List some do's and don'ts for work in the dental office.

STANDARDS

Dental Assisting National Board Certified Dental Assistant Examination Topics

General Chairside
CDA18 Office management procedures

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
M7 Integers (addition, subtraction, multiplication, division)
M8 Percents
A3 Data Interpretation (graph, table, chart, diagram)
A5 Measurement (money, time, temperature, length, area, volume)
A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
A8 Estimation (rounding, estimation)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

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Workplace Skills for the 21st Century

WP1 Allocates resources (time, money, materials and facilities, and human resources).
WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T2 Social, ethical, and human issues
T3 Technology productivity tools
T4 Technology communications tools
T5 Technology research tools
T6 Technology problem-solving and decision-making tools

SUGGESTED REFERENCES

Anderson, P. C., & Pendleton, A. E. (2001). *The dental assistant* (7th ed.). Albany, NY: Delmar.

Andujo, E. (2003). *Complete review of dental assisting*. Upper Saddle River, NJ: Prentice Hall.

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Ehrlich, A. B. (1991). *Business administration for the dental assistant* (4th ed.). Champaign, IL: Colwell Systems.

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Torres, H. O., & Mazzucchi-Ballard, L. E. (1994). *Dental assisting examination preparation*. Philadelphia: W. B. Saunders.

Course Name: Clinical Experience I

Course Abbreviation: DAT 1815

Classification: Vocational-Technical Core

Description: Supervised clinical experience in an authorized dental clinic. (5 sch: 1 hr. lecture, 12 hr. clinical)

Prerequisites: Chairside Assisting I (DAT 1415)

Competencies and Suggested Objectives
1. Correlate skills from areas with knowledge obtained from didactic and preclinical experiences. a. Apply the knowledge learned in the formal academic program to the functioning dental practice. b. Demonstrate the ability to successfully work with the dental team in the cooperating dental office according to established standards. c. Perform those chairside responsibilities taught in the formal program to the satisfaction of the cooperating dentist and the supervising instructor. d. Expose, process, and mount dental x-rays according to the standards acceptable to the supervising dentist. e. Perform tasks in the dental laboratory, such as pouring up and trimming study models, custom made trays, and other items. f. Demonstrate the ability to answer the telephone, make appointments, prepare records, and make collections according to standards acceptable to the cooperating dentist and the instructor. g. Record clinical experiences in a journal.
2. Discuss clinical activities and national boards. a. Prepare case presentations. b. Present case presentations. c. Discuss sections of the dental assisting national board exam. d. Discuss test taking techniques.

STANDARDS

Dental Assisting National Board Certified Dental Assistant Examination Topics

Radiation Health and Safety
CDA1 Expose and evaluate (intraoral and extraoral)
CDA2 Process
CDA3 Mount/label
CDA4 Radiation safety for patient
CDA5 Radiation safety for operator
Infection Control
CDA6 Patient and dental healthcare worker education

CDA7 Prevent cross-contamination and transmission
CDA8 Maintain aseptic conditions
CDA9 Perform sterilization procedures
CDA10 Environmental asepsis
CDA11 Occupational safety

General Chairside

CDA12 Collection and recording of clinical data
CDA13 Chairside dental procedures
CDA14 Chairside dental materials (preparation, manipulation, and application)
CDA15 Lab materials and procedures
CDA16 Patient education and oral health management
CDA17 Prevention and management of emergencies
CDA18 Office management procedures

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

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WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T2 Social, ethical, and human issues
T3 Technology productivity tools
T6 Technology problem-solving and decision-making tools

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Mosby's dental dictionary. (2003). St. Louis, MO: Mosby.

Torres, H. O., & Mazzucchi-Ballard, L. E. (1994). *Dental assisting examination preparation*. Philadelphia: W. B. Saunders.

Course Name: Clinical Experience II

Course Abbreviation: DAT 1822

Classification: Vocational-Technical Core

Description: Continuation of supervised clinical experience in an authorized dental clinic. (2 sch: 6 hr. clinical)

Pre/corequisites: All first semester Dental Assisting courses

Competencies and Suggested Objectives
1. Correlate skills from areas with knowledge obtained from didactic and preclinical experiences involving patient care. a. Apply the knowledge learned in the formal academic program to the functioning dental practice involving direct patient care. b. Demonstrate the ability to successfully work with the patient and the dental health team according to standards established by the supervising instructor. c. Demonstrate the ability to successfully work with the dental team in the cooperating dental office according to the established standards. d. Perform those chairside responsibilities taught in the formal program to the satisfaction of the cooperating dentist and the supervising instructor. e. When given the responsibility, expose, process, and mount dental x-rays according to the standards acceptable to the supervising dentist.
2. Correlate skills from areas with knowledge obtained from didactic and preclinical experiences involving non-patient care. a. Perform tasks in the dental laboratory, such as pouring up and trimming study models, custom made trays, and other items. b. Demonstrate the ability to answer the telephone, make appointments, prepare records, and make collections according to standards acceptable to the cooperating dentist and the instructor. c. Record clinical experiences in a journal.

STANDARDS

Dental Assisting National Board Certified Dental Assistant Examination Topics

Radiation Health and Safety
CDA1 Expose and evaluate (intraoral and extraoral)
CDA2 Process
CDA3 Mount/label
CDA4 Radiation safety for patient
CDA5 Radiation safety for operator
Infection Control
CDA6 Patient and dental healthcare worker education
CDA7 Prevent cross-contamination and transmission

CDA8 Maintain aseptic conditions
CDA9 Perform sterilization procedures
CDA10 Environmental asepsis
CDA11 Occupational safety

General Chairside

CDA12 Collection and recording of clinical data
CDA13 Chairside dental procedures
CDA14 Chairside dental materials (preparation, manipulation, and application)
CDA15 Lab materials and procedures
CDA16 Patient education and oral health management
CDA17 Prevention and management of emergencies
CDA18 Office management procedures

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
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Torres, H. O., & Mazzucchi-Ballard, L. E. (1994). *Dental assisting examination preparation*. Philadelphia: W. B. Saunders.

Recommended Tools and Equipment

CAPITALIZED ITEMS

1. Air Dryer, Dequavator (1 per program)
2. Autoclave, Steam (1 per program)
3. Cabinet, Mobile (1 per operatory)
4. Central Evacuation System (1 per program)
5. Chair, Dental (1 per operatory)
6. Compressor, Air (1 per program)
7. Dental Unit (1 per operatory)
8. Handpiece, Slow Speed (1 per operatory)
9. Handpiece, Slow Speed, Lab, Air Driven (1 per 2 students)
10. Handpiece, High Speed (1 per operatory)
11. Light Curing Unit (1 per operatory)
12. Light Dental (1 per operatory)
13. Mannequin Head, Chrome (Billy-Bob) (1 per operatory)
14. Mannequin, Radiographic (Dexter) (1 per x-ray operatory)
15. Microscope (2 per program)*
16. Mixer, Plaster (1 per program)
17. OSHA Compliance System (1 per program)
18. Processor, Automatic Film (1 per program)
19. Stool, Assistant's (1 per operatory)
20. Ultrasonic Cleaner (2 per program)
21. X-ray Machine, Intraoral (1 per x-ray operatory)
22. X-ray Machine, Panoramic (1 per program)
23. Computer with CD ROM (1 per 4 students)*
24. Printer, Laser (1 per 2 computers)*

*It is acceptable to only have access to these items.

NON-CAPITALIZED ITEMS

1. Amalgam Instruments (12 per operatory)
2. Cement Spatulas (2 per student)
3. Composite Instruments (each) (12 per operatory)
4. Impression Trays, metal rim, assorted sizes (1 pr. per size per operatory)
5. Knife, Lab (1 per student)
6. Rubber Dam, Rubber Dam Instrumentation (1 per operatory & 1 per student)
7. Safelight GBX (1 per program)
8. Sharp's Containers (1 per operatory, 1 per classroom, & 1 per lab)
9. Slabs, Glass Mixing (1 per student & 1 per operatory)
10. Spatula, Alginate (1 per student & 1 per operatory)
11. Spatulas, Plaster (1 per student & 1 per operatory)
12. Sphygmomanometer (1-2 per student & 1 per operatory)
13. Splash Hood with Light Socket/Lucite Shield (2 per lathe)

14. Stethoscope for Teaching (1-2 per student & 1 per operatory)
15. Syringe, Aspirating (2 per operatory)
16. Thermometer, Digital (1 per operatory)
17. Amalgamator (1 per 3 students)
18. Apron, Lead (1 per operatory)
19. Apron, Lead, Thyroid Collar (1 per operatory)
20. Biological Monitoring System (1 per program)
21. Chair, Operator (1 per operatory)
22. Dentoform, Assorted (1 per 2 students)
23. Developer, Chairside Instant (1 per program)
24. Duplicator, Film (1 per program)
25. Human Skull Model (1 per 3 students)
26. Instrument Cabinets, Dental (1 per program)
27. Lathe (1 per 3 students)
28. Processing Tanks (1 per program)
29. Pulp Vitalometer (1 per program)
30. Trimmer, Model (1 per sink)
31. Sterilizer, Glass Bead (1 per program)
32. Vacuum Adapter (1 per program)
33. Vibrator, Mixing (1 per 3 students)
34. View Boxes, Film (1 per student)
35. Surge Protector (1 per 2 computers)

RECOMMENDED INSTRUCTIONAL AIDS

It is recommended that instructors have access to the following items:

1. Articulator, Full Mouth (1 per program)
2. Emergency Medical Kit (1 per program)
3. Mercury Spill Absorbent Kit (1 per program)

Student Competency Profile for Dental Assisting Technology

Student:_____

This record is intended to serve as a method of noting student achievement of the competencies in each unit. Noted in parentheses beside each unit is the cluster competency from the MS-CPAS. This form may be duplicated for each student and serve as a cumulative record of competencies achieved in the course.

As an alternative to the use of this form, you may note competency achievement by attaching a report showing comparable results for each student. Please indicate that you are using this alternative report by checking here. _____

Dental Orientation (DAT 1111)

_____1. Discuss the development, function, status, and organization of the dental profession.
_____2. Discuss the educational requirements of the members of the dental profession.
_____3. Explain the professional, legal, and ethical responsibilities of the dental assistant.
_____4. Recognize and discuss word components, terms, and abbreviations related to the dental profession.
_____5. Identify various employment opportunities in the field of dental assisting.

Dental Assisting Materials (DAT 1214)

_____1. Relate safety requirements for handling dental materials and equipment.
_____2. Identify various dental materials.
_____3. Describe characteristics of gypsum products.
_____4. Describe the uses and properties of preventive dental materials.
_____5. Explain characteristics of dental cements and liners.
_____6. Discuss the uses and properties of dental waxes.
_____7. Discuss the uses and properties of plastics in dentistry.
_____8. Describe the uses and properties of precious and non-precious metals.
_____9. Discuss the properties of amalgam.
_____10. Describe the uses and properties of impression materials.
_____11. Demonstrate manipulation of gypsum products.
_____12. Demonstrate manipulation of dental cements and liners.
_____13. Demonstrate manipulation of various dental waxes.
_____14. Demonstrate manipulation of dental plastics.
_____15. Demonstrate manipulation of dental amalgam.
_____16. Demonstrate manipulation of impression materials.

Dental Science I (DAT 1313)

_____1. Describe primary and permanent dentition.
_____2. Illustrate the anatomy of a tooth.
_____3. Describe the anatomy and physiology of the head and neck.

_____4. Describe the relationships of body systems to the dental patient.

Dental Science II (DAT 1323)

_____1. Discuss embryology as related to dentistry.
_____2. Discuss pharmacology as related to dentistry.
_____3. Discuss microbiology as related to dentistry.
_____4. Discuss oral pathology as related to dentistry.

Chairside Assisting I (DAT 1415)

_____1. Describe infection control procedures in a preclinic setting.
_____2. Demonstrate infection control procedures in a preclinic setting.
_____3. Assess patient data.
_____4. Describe the role of the assistant in chairside emergencies.
_____5. Describe the equipment in a dental office.
_____6. Demonstrate the use of selected equipment found in a dental office.
_____7. Explain the role of the assistant in four-handed dentistry.
_____8. Demonstrate the use of hand instruments.
_____9. Explain the use of rotary instruments.
_____10. Implement charting techniques.
_____11. Demonstrate the procedure for local anesthesia.
_____12. Describe the amalgam procedure.
_____13. Describe the composite procedure.
_____14. Demonstrate the procedure for a temporary restoration.
_____15. Discuss an overview of chairside procedures for fixed prosthodontics.
_____16. Discuss an overview of endodontic procedures.
_____17. Discuss an overview of oral surgery procedures.

Chairside Assisting II (DAT 1423)

_____1. Describe oral surgery procedures.
_____2. Describe periodontal procedures.
_____3. Describe endodontic procedures.

Chairside Assisting III (DAT 1433)

_____1. Describe the procedure for fixed prosthodontics.
_____2. Describe procedures for removable prosthodontics.
_____3. Describe procedures for pedodontics.
_____4. Describe procedures for orthodontics.

Dental Radiology I (DAT 1513)

_____1. Describe the development of dental x-ray technology.
_____2. Describe safety factors in relation to radiation biology.

_____3. Explain the properties of dental x-ray radiation.
_____4. Discuss auxiliary techniques in patient management for exposing radiographs.
_____5. Differentiate various types of x-ray films.
_____6. Demonstrate the processing of dental film.
_____7. Identify normal anatomical landmarks used for mounting radiographs.
_____8. Describe the techniques used in exposing intraoral radiographs.
_____9. Describe the techniques used in exposing extraoral radiographs.

Dental Radiology II (DAT 1522)

_____1. Demonstrate full mouth x-rays on mannequins and patients.
_____2. Correlate skills from areas with knowledge obtained from didactic and preclinical experience.

Dental Health Education (DAT 1612)

_____1. Discuss preventive dental procedures.
_____2. Discuss the role of nutrition in dental health.

Practice Management (DAT 1714)

_____1. Describe duties of the dental office personnel.
_____2. Discuss telephone etiquette.
_____3. Describe various record keeping procedures.
_____4. Prepare a dental insurance form.
_____5. Describe bookkeeping procedures in a dental office.
_____6. Discuss general office procedures.
_____7. Utilize dental-related computer software.
_____8. Describe employability skills.
_____9. Discuss interpersonal skills needed in the dental practice.

Clinical Experience I (DAT 1815)

_____1. Correlate skills from areas with knowledge obtained from didactic and preclinical experiences.
_____2. Discuss clinical activities and national boards.

Clinical Experience II (DAT 1822)

_____1. Correlate skills from areas with knowledge obtained from didactic and preclinical experiences involving patient care.
_____2. Correlate skills from areas with knowledge obtained from didactic and preclinical experiences involving non-patient care.

Baseline Competencies

The following competencies and suggested objectives are taken from the publication *Mississippi Curriculum Framework for Allied Health*. These competencies and objectives represent the baseline which was used to develop the community/junior college Dental Assisting Technology courses. Students enrolled in postsecondary courses should either (1) have documented mastery of these competencies, or (2) be provided with these competencies before studying the advanced competencies in the Dental Assisting Technology program.

Baseline competencies may be integrated into existing courses in the curriculum or taught as special "Introduction" courses. The "Introduction" courses may be taught for up to six semester hours of institutional credit and may be divided into two courses. If the Baseline Competencies are to be taught as "Introduction" courses, each course should be at least 3 credit hours. The following course number(s) and description should be used:

Course Name(s): Introduction to Dental Assisting Technology, Introduction to Dental Assisting Technology I, or Introduction to Dental Assisting Technology II

Course Abbreviation(s): DAT 100(3-6), DAT 1013, DAT 1023

Classification: Vocational-Technical Core

Description: These courses contain the baseline competencies and suggested objectives from the high school curriculum which directly relate to the community college program. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3-6 semester hours based upon existing skills for each student. May be divided into 2 courses for a maximum total of 6 hours of institutional credit.)

Competencies and Suggested Objectives:

1. Review material related to course and professional organizations.
   a. Identify student and course expectations.
   b. Identify allied health professional student organizations and their roles in individual career development.
   c. Compare the timeline of medical history.
2. Recognize safety procedures and policies.
   a. Describe basic safety procedures.
   b. Describe accident prevention methods and disaster plans of the local school district.
   c. Discuss a safe and clean environment.
   d. Follow state and facility guidelines, including dress requirements for clinical-type experiences.
3. Explain effective communication skills.
   a. Identify the main factors required for the communication process.
   b. Identify factors which can interfere with the communication process.
   c. Demonstrate effective teamwork skills.
   d. Explore professional literature and medical references.

4. Introduce careers in the health care industry.
    a. Introduce careers in health care information and administration.
    b. Introduce careers in direct health care.
    c. Introduce careers in medical therapy.
    d. Introduce careers in diagnostic health care.
5. Discuss education and credentials required for health care careers.
    a. Discuss educational levels for health careers, including certification, associate degree, bachelor's degree, master's degree, and doctoral degree.
    b. Compare the credentials needed for careers in health care, including certification, registration, and licensure.
6. Discuss professional ethics.
    a. Explain professional ethics.
    b. Discuss confidentiality.
    c. Discuss HIPAA, the Health Insurance Portability and Accountability Act of 1996.
7. Discuss legal responsibility and client's rights.
    a. Explain torts and legal responsibility.
    b. Identify ways to promote clients' rights and privacy.
    c. Discuss the requirement for health care workers to undergo a background check.
8. Explain standard precautions.
    a. Explain importance of standard precautions in life practices and health care.
    b. Explain the state and federal government's role in standard precautions.
    c. Relate standard precautions to the transmission of infectious diseases including HIV, AIDS, HBV, and TB.
9. Utilize standard precautions.
    a. Demonstrate hand-washing technique.
    b. Demonstrate donning and removing clean gloves.
10. Perform basic emergency procedures.
    a. Explain first aid procedures for sudden illness.
    b. Explain first aid procedures for accidents.
11. Perform advanced emergency procedures.
    a. Perform CPR.
    b. Demonstrate first aid for an obstructed airway.
12. Explain medical terminology.
    a. Spell designated medical terms correctly.
    b. Demonstrate the use of medical references to spell medical terms correctly.
    c. Define and divide medical terms into root words, prefixes, and suffixes.
13. Recognize and use medical terminology.
    a. Interpret the common medical abbreviations and symbols including meanings and uses.
    b. Demonstrate the use of medical terms and abbreviations in reading, speaking, interpreting, and writing simulated medical records.
14. Review the relationship among cells, tissues, organs, and systems.
    a. Review the main parts of a cell.
    b. Review the functions of the main parts of a cell.
    c. Compare types of tissues and their relationships to body organs and systems.
15. Identify the body planes, directions, and cavities.
    a. Identify the names of the planes and the directional terms.

b. Locate the body cavities.
c. Identify the body organs in each cavity.
d. Describe the abdominal regions.

16. Interpret the basic structure and function of the skeletal system.
    a. Identify the bones of the body.
    b. Explain functions of the skeletal system.
    c. Discuss related diseases and disorders.
    d. Demonstrate procedures for patient transfer using a stretcher, wheelchair, or a pneumatic lift.
17. Measure vital signs.
    a. Measure oral temperature.
    b. Explain procedures for measuring axillary, rectal, and tympanic temperatures.
    c. Identify the body's pulse points.
    d. Demonstrate radial pulse measurement.
    e. Measure blood pressure.
18. Interpret the basic structures and functions of the digestive system.
    a. Identify organs of the digestive system.
    b. Discuss the functions of organs of the digestive system.
    c. Discuss related diseases and disorders.
19. Examine the relationship of food and health.
    a. Define terms associated with nutrition.
    b. Identify the components of the food guide pyramid with examples of each.
    c. Describe basic therapeutic diets.
    d. Demonstrate how to assist/feed a patient with a disability.
20. Interpret basic structure and functions of the sensory systems.
    a. Label the basic structures of the sensory organs.
    b. Identify the functions of the sensory organs.
21. Describe careers in the field of dentistry.
    a. Compare job descriptions in the field.
    b. Differentiate educational levels and credentials required.
22. Explain procedures related to dentistry.
    a. Explain, recognize, and use dental terminology in dental charting.
    b. Explain proper techniques of brushing and flossing.
    c. Differentiate between dentition of the child and adult.
    d. Compare the location, structure, and function of teeth.
    e. Recognize methods of prevention and detection of caries and periodontal disease.
    f. Discuss chairside assistance.
    g. Set up a basic dental tray.
    h. Discuss maintenance of the treatment room.
    i. Identify types of restorative material.
    j. Review basic methods of cleaning and sterilizing instruments.
    k. Describe the basic method of making a dental impression and model.
    l. Discuss how to place dental radiographs in proper sequence on a view box.
23. Demonstrate job seeking skills.
    a. Prepare a resume containing essential information utilizing word processing software.
    b. Complete a job application form on paper or online.

c. Discuss procedures for job interviews.
d. Demonstrate the role of an applicant in a job interview.
e. Describe job interview etiquette.

24. Explain job keeping skills.
    a. Discuss positive relations with clients and peers.
    b. Write a letter of resignation.

Appendix A: Dental Assisting National Board Certified Dental Assistant Examination Topics[1]

Radiation Health and Safety

CDA1 Expose and evaluate (intraoral and extraoral)
CDA2 Process
CDA3 Mount/label
CDA4 Radiation safety for patient
CDA5 Radiation safety for operator

Infection Control

CDA6 Patient and dental healthcare worker education
CDA7 Prevent cross-contamination and transmission
CDA8 Maintain aseptic conditions
CDA9 Perform sterilization procedures
CDA10 Environmental asepsis
CDA11 Occupational safety

General Chairside

CDA12 Collection and recording of clinical data
CDA13 Chairside dental procedures
CDA14 Chairside dental materials (preparation, manipulation, and application)
CDA15 Lab materials and procedures
CDA16 Patient education and oral health management
CDA17 Prevention and management of emergencies
CDA18 Office management procedures

[1] Dental Assisting National Board. (2004). *2004 candidate guide*. Chicago: Author.

Appendix B: Related Academic Standards[2]

Reading
R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)

Mathematics Computation
M1 Addition of Whole Numbers (no regrouping, regrouping)
M2 Subtraction of Whole Numbers (no regrouping, regrouping)
M3 Multiplication of Whole Numbers (no regrouping, regrouping)
M4 Division of Whole Numbers (no remainder, remainder)
M5 Decimals (addition, subtraction, multiplication, division)
M6 Fractions (addition, subtraction, multiplication, division)
M7 Integers (addition, subtraction, multiplication, division)
M8 Percents
M9 Algebraic Operations

Applied Mathematics
A1 Numeration (ordering, place value, scientific notation)
A2 Number Theory (ratio, proportion)
A3 Data Interpretation (graph, table, chart, diagram)
A4 Pre-Algebra and Algebra (equations, inequality)
A5 Measurement (money, time, temperature, length, area, volume)
A6 Geometry (angles, Pythagorean theory)
A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
A8 Estimation (rounding, estimation)

Language
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)

Spelling
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

[2] CTB/McGraw-Hill LLC. (1994). *Tests of adult basic education, Forms 7 and 8.* Monterey, CA: Author.
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Appendix C: Workplace Skills for the 21st Century[3]

WP1 Allocates resources (time, money, materials and facilities, and human resources).

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.

WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.

WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.

WP5 Selects, applies, and maintains/troubleshoots technology.

WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.

WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.

WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

[3] *Secretary's commission on achieving necessary skills*. (1991). Retrieved July 13, 2004, from http://wdr.doleta.gov/SCANS/

Appendix D: National Educational Technology Standards for Students[4]

T1 Basic operations and concepts
- Students demonstrate a sound understanding of the nature and operation of technology systems.
- Students are proficient in the use of technology.

T2 Social, ethical, and human issues
- Students understand the ethical, cultural, and societal issues related to technology.
- Students practice responsible use of technology systems, information, and software.
- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

T3 Technology productivity tools
- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

T4 Technology communications tools
- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

T5 Technology research tools
- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

T6 Technology problem-solving and decision-making tools
- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world.

[4] *ISTE: National educational technology standards (NETS).* (2000). Retrieved July 13, 2004, from http://cnets.iste.org/