DA A145: SPECIALIZED PRACTICES

Item	Value
Curriculum Committee Approval Date	03/09/2022
Top Code	124010 - Dental Assistant
Units	2 Total Units
Hours	66 Total Hours (Lecture Hours 21; Lab Hours 45)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	Yes
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S)

Course Description

In-depth study of bisecting and paralleling techniques employed in patient intraoral radiographs. Analysis and correction of techniques and processing errors, clinical laboratory experience exposing x-rays on patients utilizing bisecting, and paralleling techniques including film processing and mounting for various radiographic examinations. Pit and Fissure sealant laboratory practice. Preclinical and Clinical performance and evaluations of pit and fissure sealant placement. PREREQUISITE: DA A140. COREQUISITE: DA A165. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Demonstrate appropriate patient care skills and safe practices of dental x-ray equipment and utilize exposure guidelines to produce diagnostic quality dental radiographs on patients.
2. Pass written examination with 75% or better for achievement of California Radiation Safety License.
3. Students will demonstrate appropriate patient care skills, proper infection control and placement of pit and fissure sealants in the laboratory, preclinical and clinical settings.

Course Objectives

- 1. Apply all radiation safety procedures to dental equipment, operator and patient.
- 2. Demonstrate understanding of OSHA regulations in infection control when performing procedures on preclinical and clinical patients.
- 3. Accurately complete all necessary forms for the record keeping, including appropriate chart documentation and a health history on clinical patients.
- 4. Demonstrate the use of the bisecting and paralleling technique by producing diagnostic quality full mouth series (FMX) on patients.
- 5. Evaluate each of the patients full mouth x ray series, utilizing digital system and make the necessary corrections.
- 6. Describe all the extra oral techniques used in dental x ray.
- 7. Analyze ways in which radiography is used in the areas of dental caries, pulp diseases, bone sclerosis, periodontal disease and other special problems.
- 8. Distinguish radiographically between normal dental anatomy structures from possible abnormalities or pathological condition.
- 9. Educate the patient on the safety and necessity of Radiographs for proper examination and diagnosis.
- 10. Complete the required two full mouths series, utilizing digital system and have completed all required patient records correctly which meets clinical competency requirements for California Radiation License.
- 11. Demonstrate accepted protocols of OSHA regulations in infection control for radiology and pit and fissure sealant placement on patients.
- I Laboratory requirements
- I. 1. Have satisfactorily exposed two patient full mouth series, utilizing digital system as required to pass this course.
- I. 2. Complete all necessary patient records and health history, and have all documents evaluated by an instructor prior to exposing radiographs on patient.
- I. 3. Complete all films with the patient name, student/operator name. Date of exposure, x-ray unit settings, cubicle and number of films and retakes taken.
- I. 4. Evaluate their films and have an instructor completes a final evaluation, in student presence, before proceeding to next patient.
- I. 5. Follow appropriate infection control protocols and safety guidelines before, during and after patient exposure of radiographs.
- I. 6. Place pit and fissure sealant on typodont and patients to at least minimum competency level
- I. 7. Demonstrate competency of 75% or better on the Mock RDA practical exam and written pit and fissure sealant exam.
- I. 8. Accurately place pit and fissure sealant material on a typodont using established guidelines.
- I. 9. Accurately place pit and fissure sealant material on preclinical and clinical patients using established guidelines.
- I. 10. Documentation must of procedure performed must be completed in patient chart as directed by instructor.

Lecture Content

Review of Radiation Safety Procedure for patient and operator OSHA Mandated Infection Control Protocol Orientation for clinical patient Patient x-ray Prescription and consent Record keeping Health History Full Mouth Series (FMX) of Radiographs on Patients 2 FMX on Clinical patients utilizing paralleling or bisecting techniques with at least one set of FMX being digitally produced. Completion of Health History, Radiograph Prescription, and appropriate chart documentation Accurately process, mount and evaluate all FMX Take no more than 3 retakes on each patient FMX radiographs Explain to the patient the necessity of radiographs and safety protocols employed for patient protection. Evaluation and Mounting of FMX on Edentulous and Pedodontic patients V. Extra Oral Techniques Panoramic Cephalometric and their use in Orthodontics Interpretation of Radiographs Dental Caries Pulp Disease Bone sclerosis Periodontal Disease Abnormalities Pathological Conditions Digital Radiography How digital radiographs are produced Sensor Care and connection Exposure Techniques and x-ray unit settings Radiograph storage in computerized patient f ile Review storage of Chemical Agents OSHA Hazard Communication Standards Local Regulatory requirements Pit and Fissure Sealants A. History of Sealants B. Criteria for patient selection C. Material characteristics D. Instrumentation E. Infection Control protocols F. Emergency Management protocols G. Criteria for Patient Selection for

etchant and sealant material application H. Etchant and Sealant material application on patients to at least minimum competency level on typodont and patients

Lab Content

1. Have satisfactorily exposed two patient full mouth series as required to pass this course. 2. Complete all necessary patient records and health history, and have all documents evaluated by an instructor prior to exposing radiographs on patient. 3. Complete all films with the patient name, student/operator name, date of exposure, x-ray unit settings,cubicle and number of films and retakes taken. 4. Students will evaluate their films and have an instructor complete final evaluation, in student presence before proceeding to next patient. 5. Follow appropriate infection control protocols and safety guidelines before, during and after patient exposure of radiographs.6. Identify characteristics of dry field and moisture control relating to pit and fissure sealant application.7. Describe the history of sealants, sealant basics and criteria for selecting teeth for sealant application and placement.8. Identify the characteristics of etchant and sealant materials including concepts of bonding and problem solving of improperly placed materials.9. Demonstrate appropriate infection control and emergency management protocols relating to the application of pit and fissure sealant materials, as well as exposure of radiographs on a patient.10. Apply pit and fissure sealant materials with at least minimum competency to appropriate teeth on typodont and patients.

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- Lab (04)
- DE Live Online Lab (04S)

Instructional Techniques

Lecture-demonstration Laboratory with clinical patients Video and digital presentations Worksheets/student workbook Reading and written assignments Laboratory evaluation on patients Quizzes and Examinations

Reading Assignments

1. Reading assignments from textbook and student workbook chapters as assigned. Approximately 3 hours per week is needed to complete reading assignments

Writing Assignments

1. Classroom assignments via established worksheets and evaluation tools to be completed by student and instructor and turned in for a grade. Approximately 3 hours per week are needed in classroom laboratory setting to complete assignments, worksheets and evaluations

Out-of-class Assignments

HW as assigned from text and student workbook chapters. Approximately 2 hours per week is needed to complete student workbook chapters.

Demonstration of Critical Thinking

The student must pass the written examination with 75% or better. The student will produce two full mouth series on clinical patients of diagnostic quality as well as 75% or better in the written examination to earn the California radiation safety License.The student must complete placement of pit and fissure sealant material on a typodont and 4 patients with at least minimal competency.The student must pass a pit and fissure sealant written examination with at least 75% grade.1. Levels of testing: Testing will include multiple choice, written short answers, and completion type questions. This will require the student to demonstrate:a. Memory: Both total recall and recognition are necessary.b. Interpretation(1) The student must define and be able to use vocabulary specific to each radiographic study. c. Application: The student must demonstrate competency through various evaluation methods in lecture and laboratory setting. In the laboratory setting the student will demonstrate competency through procedures on clinical patients.d. Analysis: Synthesis and evaluation by both instructor and student are involved in all areas of preclinical clinical application.e. Clinical evaluation: Proficiency standards will be based on predetermined evaluation criteria.f. Evaluation of patient radiographs will include student evaluation and faculty evaluation. Remediation will occur when necessary.2. A mastery level 75% of theory and laboratory must be achieved in order to pass course with minimum grade of "C." The grading scale is:90% - 100% = A83% - 89% = B75% - 82% = C65% - 74% = D 3. A 50% lecture and 50% laboratory grade will be combined. A passing grade of C must be achieved in both laboratory and lecture.

Required Writing, Problem Solving, Skills Demonstration

Student must demonstrate at least minimal competency in producing two full mouth series of radiographs.Student must demonstrate at least minimal competency in placement of pit and fissure sealant material on typodont and four patients.

Eligible Disciplines

Dental technology (dental assisting, dental hygiene): Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.

Textbooks Resources

1. Required Bird, Robinson. A. Modern Dental Assisting, Latest ed. St. Louis, Missouri: Saunders Elsevier, 2005 Rationale: Test is required reading for didatic instruction as well as laboratory requirements.
2. Required Iannucci, Howerton. Dental Radiography Principles and Techniques, 5th ed. St. Louis Missouri: Elsevier, 2016

Manuals Resources

1. Myers, Joy L. DA 145 Course Materials Packet, Bookstore will copy for student purchase , 01-27-2014